

SEARCH REQUEST FORM RECEIVED

Scientific and Technical Information Center AUG 30 2002

Requester's Full Name: MOLLY CEPERLEY Examiner #: 5975 STI Date: _____
 Art Unit: 1641 Phone Number 308-4239 Serial Number: 04/898,885 (PCT/US 02/19187)
 Mail Box and Bldg/Room Location: CM1-8D15 Results Format Preferred (circle): PAPER DISK E-MAIL

CHI-7E12
 If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: 07/03/01

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

azide dyes

① Please search for the compounds of claim 1 limited to E=H and DYE = cyanine (a generic term for a class of dyes). The basic structure of a cyanine dye is circled in yellow in structure 2 of FIG. 3; however, cyanines can have additional substituents and rings fused on the polycyclic structures.

each of
 ② Please search for the compound fragments circled in red in FIG. 2 and FIG. 3. The basic structure of a phthalocyanine dye is circled in yellow in structure 2 of FIG. 2.

Compounds are useful in PHOTOTHERAPY.

Additional terms: sensitizer, photosensitizer, photoexcitation, aromatic chromophore, near infrared (NIR) or visible light

STAFF USE ONLY

Type of Search

Vendors and cost where applicable

Searcher: _____ NA Sequence (#) _____ STN ☒ _____
 Searcher Phone #: _____ AA Sequence (#) _____ Dialog _____
 Searcher Location: POINT OF CONTACT PAUL SCHULWITZ CM1 6806 TEL (703) 305-1854 9/10 Structure (#) 3 Questel/Orbit _____
 Date Searcher Picked Up: _____ Bibliographic _____ Dr. Link _____
 Date Completed: _____ Litigation _____ Lexis/Nexis _____
 Searcher Prep & Review Time: 60 Fulltext _____ Sequence Systems _____
 Clerical Prep Time: _____ Patent Family _____ WWW/Internet _____
 Online Time: _____ Other _____ Other (specify) _____

BEST AVAILABLE COPY

=> d que
L17

STR

N~N~N
1 2 3

← azide - can be located anywhere.

NODE ATTRIBUTES:

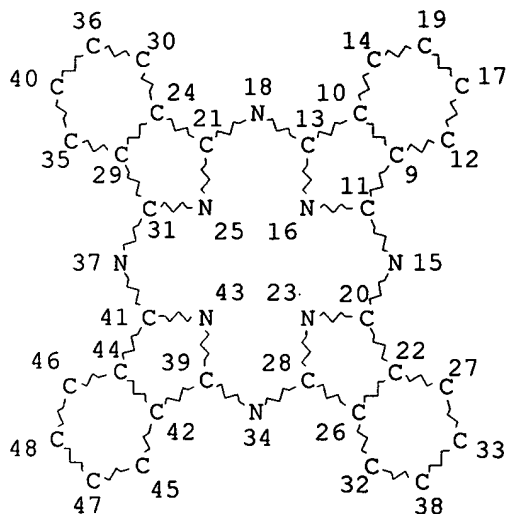
CONNECT IS E2 RC AT 1
CONNECT IS E2 RC AT 2
CONNECT IS E1 RC AT 3
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L44 STR



← Phthalocyanine dye
(open to all subst. + fusion)
all bonds unspecified

Considered-
09/17/02
MEC
All phthalocyanine
dye have metal
complexed in
the center.

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE

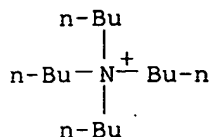
L45 24216 SEA FILE=REGISTRY SSS FUL L44
L47 29 SEA FILE=REGISTRY SUB=L45 SSS FUL L17
L48 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L47

=> d bib abs hitstr 1-16

L48 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:561924 HCAPLUS
DN 131:280634
TI Preparation and properties of tetra(n-butyl)ammonium cis-diacidooxophthalocyaninato(2-)niobates(V) and -tantalates(V). Crystal structure of (nBu4N)[cis-Nb(F)2Opc2-]
AU Schweiger, Karsten; Huckstadt, Heiner; Homborg, Heiner
CS Institut Anorganische Chemie, Christian-Albrechts-Univ., Kiel, D-24098, Germany
SO Zeitschrift fuer Naturforschung, B: Chemical Sciences (1999), 54(8), 963-969
CODEN: ZNBSEN; ISSN: 0932-0776
PB Verlag der Zeitschrift fuer Naturforschung
DT Journal
LA German
AB Tetrabutylammonium cis-diacidooxo(phthalocyaninato)niobates(V) and -tantalates(V), Bu4N[cis-MX2O(Pc)] (M = Nb, Ta; X = F, Cl, NCS, N3; H2Pc = phthalocyanine), were obtained by the reaction of cis-[MCl3(Pc)] or cis-[MCl(O)(Pc)] (M = Nb, Ta) with the resp. Bu4N salt. Bu4N[cis-NbF2(O)(Pc)] crystallizes in the monoclinic space group P21/n with a = 13.460(5), b = 13.820(5), c = 23.360(5) .ANG., .beta. = 92.640(5).degree., V = 4341(2) .ANG.3, Z = 4, .rho.c = 1.380 g/cm3, .mu.(MoK.alpha.) = 0.334 mm-1, 3828 independent reflections, R1 = 0.0443, wR2 = 0.1197 (I > 2.sigma.(I)). The heptacoordinated Nb(V) atom is surrounded by 4 isoindole N atoms (Niso) of the pc2- ligand, 2 F atoms, and 1 O atom in a distorted square-base-trigonal-cap polyhedron. Nb(V) is displaced out of the center of the (Niso)4 plane (Ct(Niso)) towards the acido ligands (d(Nb-Ct(Niso)) = 1.241 .ANG.). The av. (Nb-Niso), (Nb-F), and (Nb-O) distances are 2.300, 1.957, and 1.720(5) .ANG., the (F-Nb-F) and the av. (O-Nb-F) angles are 79.8(2) and 91.8.degree., resp. The Pc2-ligand is concavely distorted. Typical .pi.-.pi.*-transitions of the pc2-ligand are obsd. in the UV/Vis spectra at .apprxeq.14,500 and 29,300 cm-1. Vibration frequencies .nu.as,s(M-X), .nu.(M-O), and .delta.(X-M-O) were assigned.
IT 245489-32-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and UV spectra of)
RN 245489-32-1 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, diazidooxo[29H,31H-phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]niobate(1-) (9CI) (CA INDEX NAME)
CM 1
CRN 245489-31-0
CMF C32 H16 N14 Nb O
CCI CCS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2
CRN 10549-76-5
CMF C16 H36 N



RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:392857 HCAPLUS
DN 129:81844
TI C-H-activation. Syntheses and properties of acetono(C)-
acidophthalocyaninato(2-)metalates(III) of rhodium and iridium. Crystal
structure of tetra(n-butyl)ammonium acetono(C)azidophthalocyaninato(2-
)iridate(III)
AU Hueckstaedt, Heiner; Homborg, Heiner
CS Inst. Anorganische Chemie, Christian-Albrechts-Univ., Kiel, D-24098,
Germany
SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1998), 624(6),
980-986
CODEN: ZAACAB; ISSN: 0044-2313
PB Johann Ambrosius Barth
DT Journal
LA German
AB Phthalocyaninato(2-)metalate(I) of Rh and Ir reacts with carbonyl
substrates like Me2CO or acetylacetone and halides or pseudohalides
forming acetono(C)- or acetylacetonato(C)acidophthalocyaninato(2-
)metalates(III), that are isolated as Bu4N complex salts
(Bu4N)[M(R)(X)pc2-] [M = Rh, Ir; R = acetono(aC), acac; X = Cl, I, N3,
SCN/NCS]. (Bu4N)[Ir(aC)(N3)pc2-].cntdot.0.25Et2O.cntdot.0.5CH2Cl2
crystallizes in the triclinic space group P.hivin.1 with a 16.267(8), b
17.938(3), c 18.335(4) .ANG., .alpha. 74.77(2), .beta. 73.73(3), .gamma.
84.25(3).degree., Z = 4, .rho.c = 1.480 g/cm3, .mu.(MoK.alpha.) = 2.801
mm-1, 7806 obsd. reflections with I > 2.sigma.(I), R1 = 0.0447, wR2 =
0.0893. There are 2 crystallog. independent anions, differing by the
orientation of the azido ligand either towards an isoindole group or a
Naza bridge of the phthalocyaninate, while the .sigma.-C bonded acetone
is always oriented towards an isoindole group (gauche and ecliptic
configuration). The Ir-C distances are 2.12(1) and 2.14(1) .ANG.. Due to
the trans influence of the acetone-C atom the Ir-azide-N distances of
2.22(1)/2.24(1) .ANG. are longer than expected. The electrochem.
properties and the optical, vibrational, and 1H-NMR spectra are discussed.
IT 209416-05-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; prepn. of [acetono(C)acidophthalocyaninato]metala
tes of rhodium and iridium)
RN 209416-05-7 HCAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, (OC-6-42)-azido(2-oxopropyl)[29H,31H-
phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]iridate(1-
) , compd. with dichloromethane and 1,1'-oxybis[ethane] (4:2:1) (9CI) (CA
INDEX NAME)

CM 1

CRN 75-09-2
CMF C H2 Cl2

Cl-CH₂-Cl

CM 2

CRN 60-29-7
CMF C4 H10 O

H₃C-CH₂-O-CH₂-CH₃

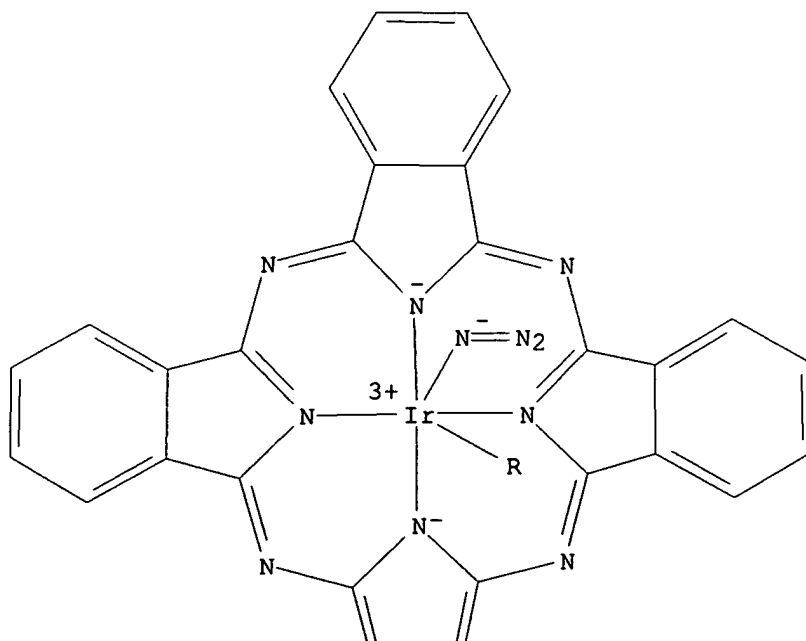
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CRN 209416-03-5
CMF C35 H21 Ir N11 O . C16 H36 N

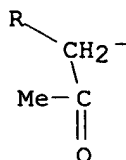
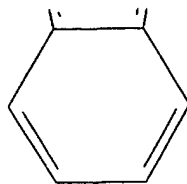
CM 4

CRN 209416-02-4
CMF C35 H21 Ir N11 O
CCI CCS
CDES 7:OC-6-42

PAGE 1-A



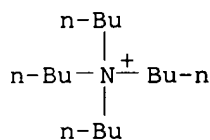
PAGE 2-A



CM 5

CRN 10549-76-5

CMF C16 H36 N



IT 209416-03-5P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
 (electrochem. redox; prepn. of [acetonato(C)acidophthalocyaninato]metal
 ates of rhodium and iridium)

RN 209416-03-5 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, (OC-6-42)-azido(2-oxopropyl)[29H,31H-phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]iridate(1-)
) (9CI) (CA INDEX NAME)

CM 1

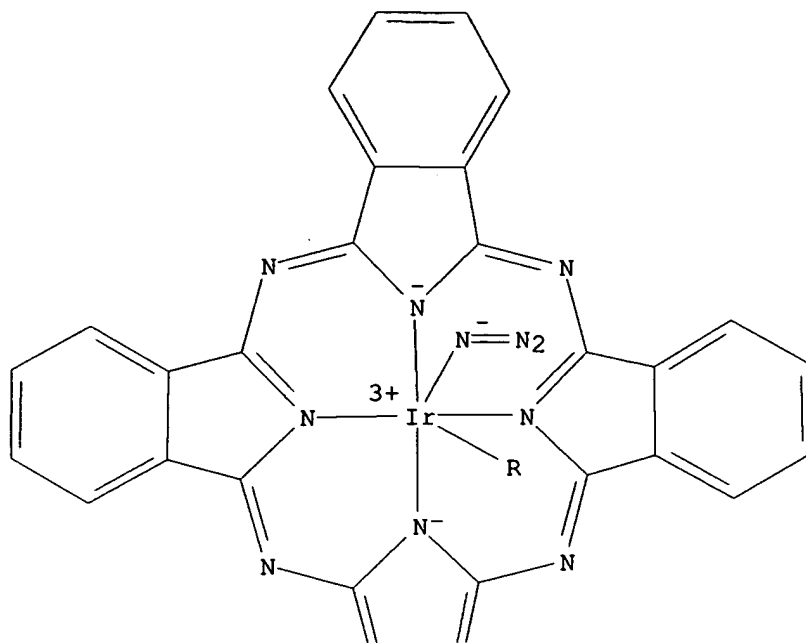
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CMF C35 H21 Ir N11 O

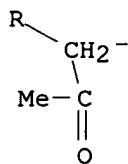
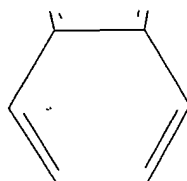
CCI CCS

CDES 7:OC-6-42

PAGE 1-A



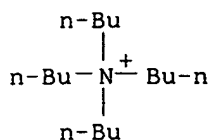
PAGE 2-A



CM 2

CRN 10549-76-5

CMF C16 H36 N



L48 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:336098 HCAPLUS

DN 129:89440

TI Synthesis and properties of (acido)(nitrosyl)phthalocyaninato(2-)ruthenium

AU Weidemann, Morten; Sievertsen, Svend; Homborg, Heiner

CS Institut Anorganische Chemie, Christian-Albrechts-Universitaet, Kiel, D-24098, Germany

SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1998), 624(5), 909-918

CODEN: ZAACAB; ISSN: 0044-2313

PB Johann Ambrosius Barth

DT Journal

LA German

AB [Ru(X)(NO)pc₂-] (X = F, Cl, Br, I, CN, NCO, NCS, NCSe, N₃, NO₂) were obtained by acidification of a soln. of (Bu₄N)₂[Rupc₂-(NO₂)₂] in THF with the corresponding conc. mineral acid or aq. ammonium salt soln. The nitrite-nitrosyl conversion is reversal in basic media. The cyclic and differential pulse voltammograms show mainly 3 quasi-reversible 1-electron processes at 1.05, -0.65, and -1.25 V, ascribed to the 1st ring oxidn. and the stepwise redn. to the complexes of type {RuNO}₇ and {RuNO}₈, resp. The B < Q < N regions in the electronic absorption spectra are still typical for the pc₂- ligand, but are each split into 2 strong absorptions (14,500/16,500(B); 28,000/30,500(Q); 34,500/37,000 cm⁻¹(N)), whose relative intensities strongly depend on the nature of the axial ligand X. In the IR spectra is active the N-O stretching vibration between 1827 (X = I) and 1857 cm⁻¹ (F), the C-N stretching vibration at 2178 (X = NCO), 2072 (NCS), 2066 (NCSe), 2093 cm⁻¹ (CN), the N-N stretching vibration of the azide ligand at 2045 cm⁻¹, the fundamentals of the nitrito(O) ligand at 1501, 932, and 804 cm⁻¹, and the Ru-X stretching vibration at 483 (F), 332 (Cl), 225 (Br), 183 (I), 395 (N₃), 364 (ONO), 403 (CN), 263 (NCS), and 231 cm⁻¹ (NCSe). In the resonance Raman spectra, excited in coincidence with the B region, the Ru-NO stretching vibration and the very intense Ru-N-O deformation vibration are selectively enhanced between 580-618 cm⁻¹, and between 556-585 cm⁻¹, resp.

IT 209250-18-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and UV, Raman, and IR spectra of)

RN 209250-18-0 HCAPLUS

CN Ruthenium, azidonitrosyl[29H,31H-phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, (OC-6-23)- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L48 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:336087 HCAPLUS

DN 129:89436

TI Syntheses and properties of (acido)(pyridine)phthalocyaninato(2-)ruthenates(II). Crystal structure of tetrabutylammonium

(cyano)(pyridine)phthalocyaninato(2-)ruthenate(II)
 AU Weidemann, Morten; Hueckstaedt, Heiner; Homborg, Heiner
 CS Institut Anorganische Chemie, Christian-Albrechts-Universitaet, Kiel,
 D-24098, Germany
 SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1998), 624(5),
 846-852
 CODEN: ZAACAB; ISSN: 0044-2313
 PB Johann Ambrosius Barth
 DT Journal
 LA German
 AB (Bu4N)2[RuX2Pc] reacts in boiling pyridine to yield blue purple,
 diamagnetic Bu4N[RuX(py)Pc] (X = CN, N3, NCS, NCO, NO2).
 Bu4N[Ru(CN)(py)Pc] crystallizes in the orthorhombic space group Pca21 (no.
 29) with a = 28.319(5), b = 29.850(3), c = 24.566(7) .ANG., V = 20,766(7)
 .ANG.3, Z = 16, .rho.c = 1.184 g/cm3, .mu.(MoK.alpha.) = 0.346 mm-1,
 14.784 independent reflections, R1 = 0.0742, wR2 = 0.1725 for I >
 2.sigma.(I) with 4 crystallog. independent complex anions present in the
 unit cell. Each Ru atom is located outside the center (Ct) of the
 corresponding (Niso)4 plane (Niso: isoindoline N atom) and coordinates
 axially pyridine and cyanide in a mutual trans position. The largest
 vertical displacement of the Ru atom from the (Niso)4 plane towards
 cyanide (d(Ru-Ct)) is 0.020 .ANG.. The Ru-Niso distance varies from
 1.947(2) to 1.992(2) .ANG.. The av. Ru-C and Ru-Npy distance is 2.00
 .ANG. and 2.19 .ANG., resp. The Pc2- ligand is slightly distorted towards
 the cyanide. The cyclic and differential pulse voltammograms of
 Bu4N[Ru(X)(py)Pc] exhibit the 1st quasi-reversible 1-electron process (in
 V) at 0.46 (X = CN), 0.34 (N3), 0.40 (NCO), 0.47 (NO2), 0.50 V(NCS) and
 the 2nd, independent of X, at .apprxeq.1.05 V. The 1st process is
 metal-directed, the 2nd ring-directed. The electronic absorption spectra
 and the vibrational spectra of (nBu4N)[Ru(X)(py)pc2-] are discussed.
 IT **209250-71-5P**
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN
 (Synthetic preparation); PREP (Preparation); PROC (Process); RACT
 (Reactant or reagent)
 (prepn. and electrochem. redn. of)
 RN 209250-71-5 HCAPLUS
 CN 1-Butanaminium, N,N,N-tributyl-, (OC-6-32)-azido[29H,31H-
 phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32] (pyridine
)ruthenate(1-) (9CI) (CA INDEX NAME)

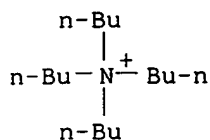
CM 1

CRN 209250-70-4
 CMF C37 H21 N12 Ru
 CCI CCS
 CDES 7:OC-6-32

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 10549-76-5
 CMF C16 H36 N



IT 209250-79-3

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of tetra(n-butyl)ammonium (acido)(pyridine)phthalocyaninato(2-)
)ruthenates(II))

RN 209250-79-3 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, (OC-6-12)-diazido[29H,31H-
 phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]ruthenate
 (2-) (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 209250-78-2

CMF C32 H16 N14 Ru

CCI CCS

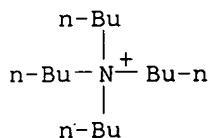
CDES 7:OC-6-12

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 10549-76-5

CMF C16 H36 N



L48 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:106515 HCAPLUS

DN 128:162193

TI Bis(bis(triphenylphosphine)iminium) .mu.-nitridobis(azidophthalocyaninato(
 2-)ferrate(IV)) triiodide diethyl ether di-solvate. Synthesis, properties,
 and crystal structure

AU Kienast, Arne; Homborg, Heiner

CS Institut Anorganische Chemie, Christian-Albrechts-Universitaet, Kiel,
 D-24098, Germany

SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1998), 624(2),
 233-238

CODEN: ZAACAB; ISSN: 0044-2313

PB Johann Ambrosius Barth

DT Journal

LA German

AB [(Ph3P)2N]2{[FePcN3]2N}I3.2Et2O (I) was prepd. by substitution of
 {[FePc(py)]2N}I5 with (Ph3P)2NN3 in Me2CO and pptn. by slow diffusion of
 Et2O. I crystallizes monoclinically in the space group C12/c1 (no. 15)

with $a = 34.567(9)$, $b = 20.237(9)$, $c = 21.251(5)$.ANG., $\beta = 119.79(2)$.degree., $V = 12,902(7)$.ANG.³, $Z = 4$, $\rho_c = 1.463$ g/cm³, $\mu(\text{MoK}\alpha) = 1.057$ mm⁻¹, 11,302 independent reflections, 813 refined parameters, $R_1 = 0.082$ for $I > 2\sigma(I)$, $wR_2 = 0.203$ (all data). The Fe atoms are located almost in the center (Ct) of the (Niso)₄ planes ($d(\text{Fe-Ct}) = 0.080(1)$.ANG.; Niso: isoindole N atom). The av. Fe-Niso distance is $1.947(5)$.ANG., the Fe-(μ -N) distance $1.650(1)$.ANG.. The Fe-(μ -N)-Fe skeleton is linear ($177.4(4)$.degree.). Both waving pc²-ligands are in a staggered conformation (skew angle $\phi = 38.5(5)$.degree.). Fe coordinates linear azide ($d(\text{Fe-Nazide}) = 2.152(7)$.ANG.) with an angle of $121.2(6)$.degree.. The isolated triiodide ion is almost linear ($d(\text{I-I}) = 2.936(2)$.ANG.). The PNP cation obtains an hybrid conformation ($\angle(\text{P-N-P}) = 157.4(2)$.degree.). The asym. Fe-(μ -N)-Fe stretching vibration is obsd. in the IR spectrum at 997 cm⁻¹, the sym. one is selectively enhanced in the resonance Raman (RR) spectrum at 478 cm⁻¹. The corresponding I-I stretching vibrations of the I₃⁻ ion are present in the actual spectra at 134 (IR) and 115 cm⁻¹ (RR). An IR band at 334 cm⁻¹ is attributed to the asym. Fe-Nazide stretching vibration.

IT 202663-19-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn., crystal and mol. structure, and IR and Raman spectra of)

RN 202663-19-2 HCAPLUS

CN Phosphorus(1+), triphenyl(P,P,P-triphenylphosphine imidato- κ N)-, (T-4)-, diazido- μ -nitridobis[29H,31H-phthalocyaninato(2-)- κ N29, κ N30, κ N31, κ N32]diferrate(1-) (triiodide), compd. with 1,1'-oxybis[ethane] (2:1:1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 60-29-7

CMF C4 H10 O

H₃C-CH₂-O-CH₂-CH₃

CM 2

CRN 202663-18-1

CMF C64 H32 Fe2 N23 . 2 C36 H30 N P2 . I3

CM 3

CRN 202663-17-0

CMF C64 H32 Fe2 N23

CCI CCS

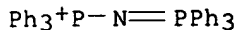
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 48236-06-2

CMF C36 H30 N P2

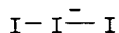
CDES 7:T-4



CM 5

CRN 14900-04-0

CMF I3



L48 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:384261 HCAPLUS

DN 125:156903

TI Ruthenium(II) phthalocyaninates(2-): synthesis and properties of (acido)(carbonyl)phthalocyaninato(2-)ruthenate(II), [Ru(X)(CO)Pc2-]- (X = Cl, Br, I, NCO, NCS, N3)

AU Weidemann, M.; Homborg, H.

CS Inst. Anorg. Chem. Christian-Albrechts-Univ., Kiel, Germany

SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1996), 622(7), 1182-1186

CODEN: ZAACAB; ISSN: 0044-2313

PB Barth

DT Journal

LA German

AB (Bu4N)[Ru(OH)2Pc2-] is reduced in acetone with CO to blue-violet [Ru(H2O)(CO)Pc2-], which yields in THF with excess Bu4NX [Ru(X)(CO)Pc2-]- (X = Cl, Br, I, NCO, NCS, N3), isolated as red-violet, diamagnetic Bu4N+ complex salt. The UV-visible spectra are dominated by the typical .pi.-.pi.* transitions of the Pc2- ligand at .apprx.15,100 (B), 28,300 (Q1) and 33,500 cm-1 (Q2), only fairly dependent on the axial ligands. .nu.(C-O) is obsd. at 1927 (X = I), 1930 (Cl, Br), 1936 (N3, NCO) 1948 cm-1 (NCS), .nu.(C-N) at 2208 cm-1 (NCO), 2093 cm-2 (NCS) and .nu.(N-N) at 2030 cm-1 only in the MIR spectrum. .nu.(Ru-C) coincides in the FIR spectrum with a deformation vibration of the Pc ligand, but is detected in the resonance Raman(RR) spectrum at 516 (X = Cl), 512(Br), 510 (N3), 504(I), 499 (NCO), 498 cm-1 (NCS). .nu.(Ru-X) is obsd. in the FIR spectrum at 257 (X = Cl), 191(Br), 166(I), 349(N3), 336(NCO) and 224 cm-1 (NCS). Only .nu.(Ru-I) is RR-enhanced.

IT 179931-15-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and vibrational spectra of)

RN 179931-15-8 HCAPLUS

CN 1-Butanaminium, N,N,N-tributyl-, (OC-6-42)-azidocarbonyl[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]ruthenate(1-) (9CI) (CA INDEX NAME)

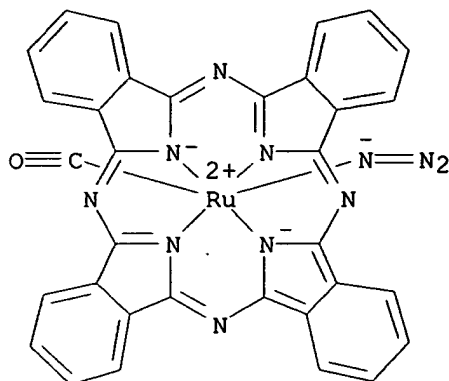
CM 1

CRN 179931-14-7

CMF C33 H16 N11 O Ru

CCI CCS

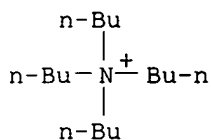
CDES 7:OC-6-42



CM 2

CRN 10549-76-5

CMF C16 H36 N



L48 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:994705 HCAPLUS

DN 124:32469

TI Metal phthalocyanines as catalysts for oxidation of alkanes and decomposition of organic hydroperoxides

IN Bhinde, Manoj V.; Lyons, James E.; Ellis, Paul E., Jr.

PA Sun Co., Inc. (R and M), USA

SO Eur. Pat. Appl., 6 pp.

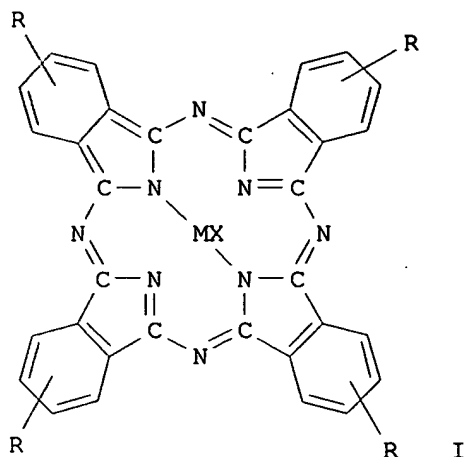
CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 676238	A2	19951011	EP 1995-302244	19950404
	EP 676238	A3	19960501		
	R: BE, DE, FR, GB, IT, NL				
	CA 2146314	AA	19951005	CA 1995-2146314	19950404
	JP 07278152	A2	19951024	JP 1995-101583	19950404
PRAI	US 1994-222747		19940404		
OS	MARPAT 124:32469				
GI					



AB Metal phthalocyanines I (R = H, hydrocarbyl, halocarbyl, halohydrocarbyl; .gtoreq.1 R .noteq. H; M = Fe, Co, Mn, Cu, Ru, Cr; X = halo, OH, azido) and their .mu.-oxo dimers are useful as highly active catalysts for the decompn. of hydroperoxides and for the partial oxidn. of hydrocarbons. A soln. of tert-butylphthalic anhydride was treated with urea, ammonium molybdate, and FeCl₃, and the product was treated with Na azide to give I (R = tert-Bu; M = Fe; X = azido) which showed high activity as a catalyst for the decompn. of tert-BuOOH in tert-BuOH.

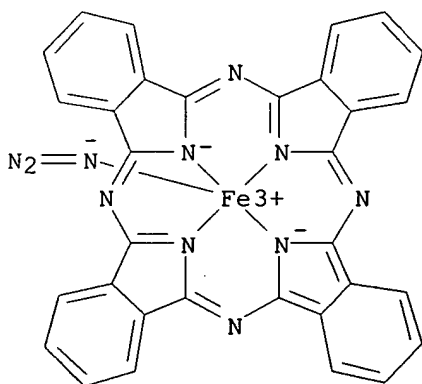
IT 165407-52-3

RL: CAT (Catalyst use); USES (Uses)

(catalysts; prepn. and use for decompn. of hydroperoxides and oxidn. of alkanes)

RN 165407-52-3 HCAPLUS

CN Iron, azido[C,C,C,C-tetrakis(1,1-dimethylethyl)-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]- (9CI) (CA INDEX NAME)



4 (D1-Bu-t)

L48 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:695991 HCAPLUS

DN 123:82824

TI Metal-ligand catalyzed decomposition of organic hydroperoxides

IN Bhinde, Manoj V.; Lyons, James E.; Ellis, Jr Paul E.

PA Sun Company, Inc. (RandM), USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>US 5395988</u>	A	19950307	US 1994-223090	19940404
	US 5550301	A	19960827	US 1995-398024	19950303
	CA 2146316	AA	19951005	CA 1995-2146316	19950404
	EP 676221	A1	19951011	EP 1995-302245	19950404
	EP 676221	B1	19981223		
	R: BE, DE, FR, GB, IT, NL				
	JP 08048641	A2	19960220	JP 1995-101582	19950404
	US 5672778	A	19970930	US 1996-703423	19960826
PRAI	US 1994-223090		19940404		
	US 1995-398024		19950303		

AB Org. hydroperoxides are decompd. by drying a reaction mixt. contg. the org. hydroperoxide and an org. solvent and contacting the dried reaction mixt. with a metal org. ligand catalyst, such as Fe phthalocyaninato complexes, under hydroperoxide decompn. conditions. An org. co-solvent for the hydroperoxide may also be used.

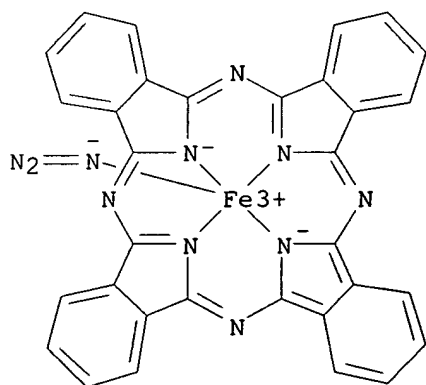
IT 165407-52-3P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)

(decompn. catalyst for org. hydroperoxides involving drying method)

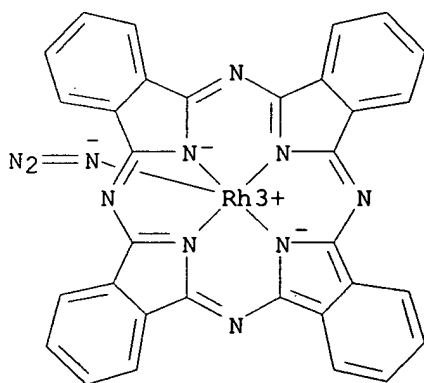
RN 165407-52-3 HCAPLUS

CN Iron, azido[C,C,C,C-tetrakis(1,1-dimethylethyl)-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]- (9CI) (CA INDEX NAME)



4 (D1-Bu-t)

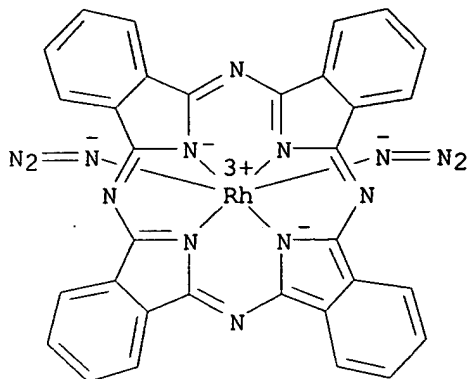
L48 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 AN 1994:449025 HCAPLUS
 DN 121:49025
 TI Preparation and spectroscopical characterization of
 di(acido)phthalocyaninotorhodates(III)
 AU Ostendorp, G.; Sievertsen, S.; Homborg, H.
 CS Inst. Anorg. Chem., Christian-Albrechts-Univ., Kiel, Germany
 SO Z. Anorg. Allg. Chem. (1994), 620(2), 279-89
 CODEN: ZAACAB; ISSN: 0044-2313
 DT Journal
 LA German
 AB Rh(en)3I3 reacts quickly and completely with boiling phthalodinitrile
 pptg., "rhodiumphthalocyanine", which is purified and dissolved in alk.
 media as RhPc(OH)2-. Acidification in the presence of halides or
 pseudohalides yields Bu4N[Rh(X)2Pc] (X = Cl, Br, I, N3, CN, NCO, SCN,
 SeCN). The asym. Rh-X-stretching vibration (.nu.as(RhX)) is obsd. in the
 far-IR. .nu.s(RhI) is the only sym. Rh-X-stretching vibration excited at
 131 cm-1 in the Raman spectrum. The middle-IR and resonance Raman spectra
 are typical for hexacoordinated phthalocyaninatometalates(III). The
 influence of the axial ligands is very small. The frequency of the
 stretching vibrations of the pseudohalo-ligands are as expected. The
 characteristic .pi.-.pi.*-transitions of the Pc2--ligand dominate the
 UV-visible spectra. The splitting of the Q and N region is discussed and
 the weak absorbance at .apprx.22 kK is assigned to a n-.pi.*-transition.
 IT 155964-34-4P, Azido(phthalocyaninato)rhodium
 RL: RCT (Reactant); PREP (Preparation)
 (formation and reaction of, with pseudohalide)
 RN 155964-34-4 HCAPLUS
 CN Rhodium, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-5-12)-
 (9CI) (CA INDEX NAME)



IT 155964-30-0P, Tetrabutylammonium diazido(phthalocyaninato)rhodate(
 1-)
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and electronic and vibrational spectra of)
 RN 155964-30-0 HCAPLUS
 CN 1-Butanaminium, N,N,N-tributyl-, (OC-6-12)-diazido[29H,31H-
 phthalocyaninato(2-)-N29,N30,N31,N32]rhodate(1-) (9CI) (CA INDEX NAME)

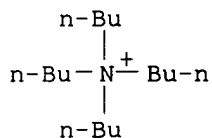
CM 1

CRN 155964-29-7
 CMF C32 H16 N14 Rh
 CCI CCS
 CDES 7:OC-6-12



CM 2

CRN 10549-76-5
 CMF C16 H36 N



L48 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1992:472028 HCAPLUS

DN 117:72028

TI Azide activation of metallophthalocyanine complexes for the catalytic
 oxidation of alkanes in the liquid phase

AU Lyons, James E.; Ellis, Paul E., Jr.

CS Res. Dev. Dep., Sun Co., Inc., Marcus Hook, PA, 19061, USA

SO Appl. Catal., A (1992), 84(2), L1-L6

CODEN: ACAGE4

DT Journal

LA English

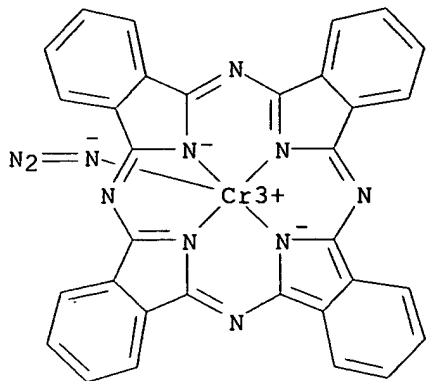
AB Cr and Mn phthalocyanine azides catalyze selective oxidn. of isobutane to
 tert-Bu alc. and Fe perfluorophthalocyanine azides are robust, sol.,
 active catalysts for the selective oxidn. of isobutane and propane under
 mild conditions of temp. and pressure.

IT 108820-38-8 108820-40-2 142711-85-1

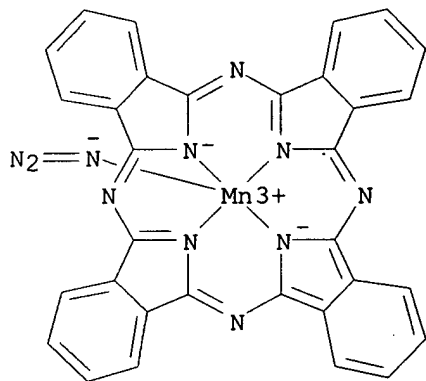
RL: CAT (Catalyst use); USES (Uses)

(catalysts, for oxidn. of isobutane to tert-Bu alc.)

RN 108820-38-8 HCAPLUS

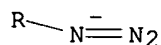
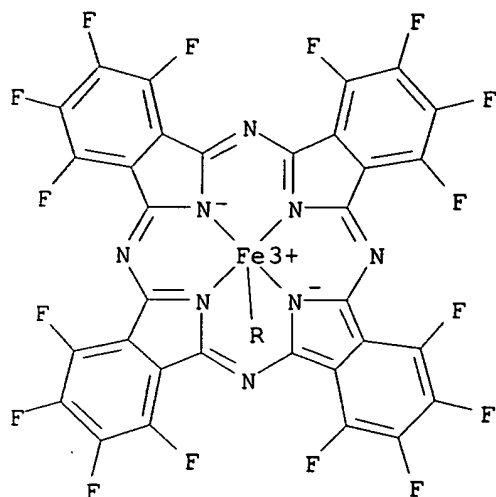
CN Chromium, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-5-12)-
(9CI) (CA INDEX NAME)

RN 108820-40-2 HCAPLUS

CN Manganese, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-,
(SP-5-12)- (9CI) (CA INDEX NAME)

RN 142711-85-1 HCAPLUS

CN Iron, azido[1,2,3,4,8,9,10,11,15,16,17,18,22,23,24,25-hexadecafluoro-
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-5-12)- (9CI) (CA
INDEX NAME)



L48 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:631449 HCAPLUS

DN 111:231449

TI Hydrocarbon oxidations catalyzed by azide- or nitride-activated metal coordination complexes

IN Ellis, Paul E.; Lyons, James E.; Myers, Harry K.

PA Sun Refining and Marketing Co., USA

SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

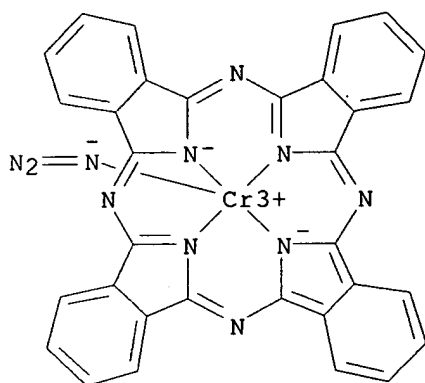
DT Patent

LA English

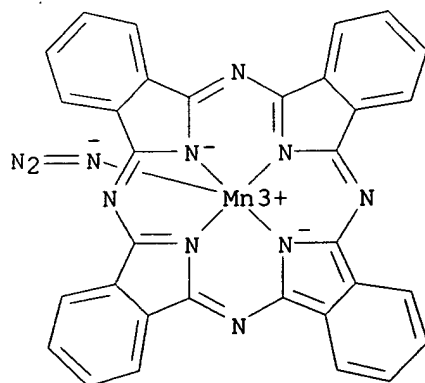
FAN.CNT 11

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 274909	A2	19880720	EP 1987-311480	19871229
	EP 274909	A3	19900207		
	EP 274909	B1	19940810		
	R: BE, DE, FR, GB, IT, NL				
	US 4895682	A	19900123	US 1987-246	19870102
	US 4895680	A	19900123	US 1987-247	19870102
	CA 1302433	A1	19920602	CA 1987-553416	19871203
	CA 1336188	A1	19950704	CA 1987-553420	19871203
	NO 8705496	A	19880704	NO 1987-5496	19871230
	NO 169710	B	19920421		
	NO 169710	C	19920729		
	SU 1833358	A3	19930807	SU 1987-4203962	19871231
	JP 01180840	A2	19890718	JP 1988-46	19880104
	JP 2517340	B2	19960724		
	US 5663328	A	19970902	US 1996-672202	19960627
PRAI	US 1987-246		19870102		
	US 1987-247		19870102		
	US 1987-66666		19870626		

US 1989-425089 19891023
US 1990-568116 19900816
US 1994-303106 19940907
OS CASREACT 111:231449
AB The title process is used in the prepn. of alcs., ketones, acids, esters, or mixts. thereof. For example, oxidn. of 7 g isobutane in C₆H₆ at 80.degree. and 75 psig O₂ for 6 h in the presence of 0.025 mmol Co(L)N₃ [L = 1,3-bis(2-pyridylimino)isoindoline] gave a turn over no. of 196 which was quite superior to Co(L)(OAc) or Co(acac)₂ with added NaN₃. Products were Me₃COH and Me₂CO.
IT 108820-38-8 108820-40-2
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for oxidn. of hydrocarbons)
RN 108820-38-8 HCAPLUS
CN Chromium, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-5-12)- (9CI) (CA INDEX NAME)

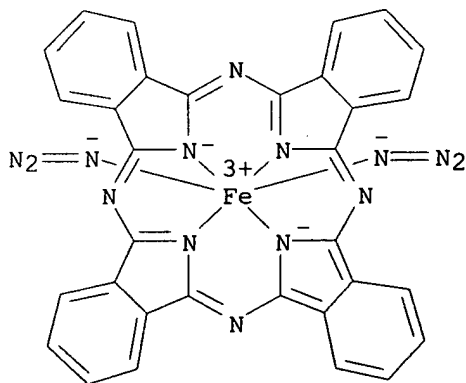


RN 108820-40-2 HCAPLUS
CN Manganese, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-5-12)- (9CI) (CA INDEX NAME)



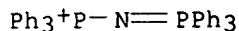
L48 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2002 ACS

AN 1988:414104 HCAPLUS
 DN 109:14104
 TI Applied field Moessbauer spectra of low-spin mononuclear and binuclear iron(III)-phthalocyanines
 AU Bakshi, E. N.; Murray, K. S.
 CS Dep. Chem., Monash Univ., Clayton, 3168, Australia
 SO Hyperfine Interact. (1988), 40(1-4), 283-6
 CODEN: HYINDN; ISSN: 0304-3843
 DT Journal
 LA English
 AB Low-spin Fe(III) phthalocyanine (Pc) complexes recently were synthesized. Two 6-coordinate examples, a binuclear μ -oxo bridged complex $[((\gamma\text{-picoline})\text{FePc})_2\text{O}]$, I, and a mononuclear bis-azido complex $(\text{PNP})[\text{FePc}(\text{N}_3)_2]$, II, display typical $S = 1/2$ Fe(III) parameters (I, $\Delta = 0.20$ mm/s, $\Delta_{\text{EQ}} = 1.79$ mm/s; II, $\Delta = 0.22$ mm/s, $\Delta_{\text{EQ}} = 2.47$ mm/s at 4.2 K). As an applied longitudinal magnetic field is increased to 32 kOe the corresponding splittings in I and II indicate small effective fields at the Fe nuclei. This is due to an S:O ground state in the weakly antiferromagnetically coupled complex I. The small hyperfine splitting in II contrasts with the resolved hyperfine splitting reported for various $S = 1/2$ Fe(III) porphyrins and Fe(III) heme proteins.
 IT 102588-77-2
 RL: PRP (Properties)
 (Moessbauer spectra of, in applied magnetic field)
 RN 102588-77-2 HCAPLUS
 CN Phosphorus(1+), triphenyl(P,P,P-triphenylphosphine imidato-N)-, (T-4)-, (OC-6-12)-diazido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]ferrate(1-)(9CI) (CA INDEX NAME)
 CM 1
 CRN 102588-76-1
 CMF C32 H16 Fe N14
 CCI CCS
 CDES 7:OC-6-12

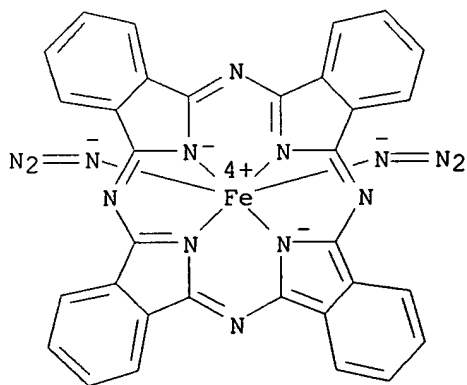


CM 2

CRN 48236-06-2
 CMF C36 H30 N P2
 CDES 7:T-4



L48 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 AN 1988:67798 HCAPLUS
 DN 108:67798
 TI Iron(IV) phthalocyanines. Magnetic and spectral features of .mu.-nitrido-iron-phthalocyanine, (FePc)2N and of some oxidized derivatives
 AU Kennedy, Brendan J.; Murray, Keith S.; Homborg, Heinrich; Kalz, Winfried
 CS Dep. Chem., Monash Univ., Clayton, 3168, Australia
 SO Inorg. Chim. Acta (1987), 134(1), 19-21
 CODEN: ICHAA3; ISSN: 0020-1693
 DT Journal
 LA English
 AB The thermal decompn. of (Ph3P)2N[Fe(N3)2Pc] (H2Pc = phthalocyanine) gave (FePc)2N which was also prepd. by decompn. of {Fe(N3)2[Pc(1-)]}.0.25I2. (FePc)2N reacted with excess Br, CF3CO2H or HNO3 in CH2Cl2 to give [(XFePc)2N]X (I; X = Br, CF3CO2, NO3). (FePc)2N and I were characterized by IR, ESR and Moessbauer spectra and magnetic moments. The Fe atoms in (FePc)2N are equiv., and (FePc)2N has electronic properties similar to [Fe(TPP)]2N (H2TPP = tetraphenylporphyrin) with more pronounced Fe(IV) character. The most probable valency formalism of I is [XFeIVPc(1-)N:FeIVPc(1-)X]+.
 IT **112643-29-5D**, oxidized, iodide (Fe(C32H16N8)(N3)2)I0.5)
 RL: RCT (Reactant)
 (decompn. of, iron phthalocyaninato nitrido dinuclear complex by)
 RN 112643-29-5 HCAPLUS
 CN Iron, diazido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (OC-6-12)-(9CI) (CA INDEX NAME)

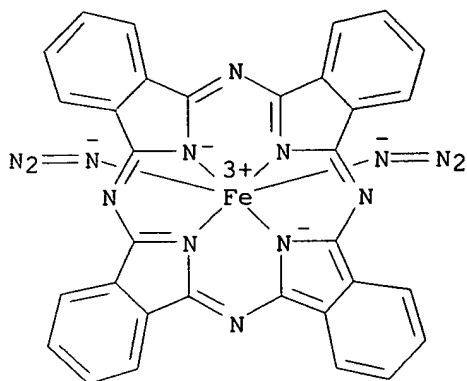


IT **102588-77-2**
 RL: RCT (Reactant)
 (thermal decompn. of, iron phthalocyaninato nitrido dinuclear complex)

by)
 RN 102588-77-2 HCAPLUS
 CN Phosphorus(1+), triphenyl(P,P,P-triphenylphosphine imidato-N)-, (T-4)-,
 (OC-6-12)-diazido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]ferrate(1-)
 (9CI) (CA INDEX NAME)

CM 1

CRN 102588-76-1
 CMF C32 H16 Fe N14
 CCI CCS
 CDES 7:OC-6-12



CM 2

CRN 48236-06-2
 CMF C36 H30 N P2
 CDES 7:T-4

$\text{Ph}_3\text{P}-\text{N}=\text{PPh}_3$

L48 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 AN 1987:469540 HCAPLUS
 DN 107:69540
 TI Synthesis and properties of (.mu.-thiocyanato) and (.mu.-
 azido)phthalocyaninato-metal-complexes
 AU Hanack, M.; Hedtmann-Rein, C.; Datz, A.; Keppeler, U.; Muenz, X.
 CS Inst. Org. Chem., Univ. Tuebingen, Tuebingen, D-7400, Fed. Rep. Ger.
 SO Synth. Met. (1987), 19(1-3), 787-92
 CODEN: SYMEDZ; ISSN: 0379-6779
 DT Journal
 LA English
 AB Stacked bridged phthalocyaninato metal complexes with thiocyanate and
 azide as bridging ligands, which form 1 .sigma.- and 1 coordinative bond
 to the central metal atom are prepn. The properties and conductivities of
 [PcM(SCN)]_n (M = Mn, Fe, Co) and [PcMN3]_n (M = Cr, Mn) polymers are

reported.

IT 108820-39-9P 108820-41-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., elec. cond. and thermal decompn. of)

RN 108820-39-9 HCAPLUS

CN Chromium, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-,
(SP-5-12)-, homopolymer (9CI) (CA INDEX NAME)

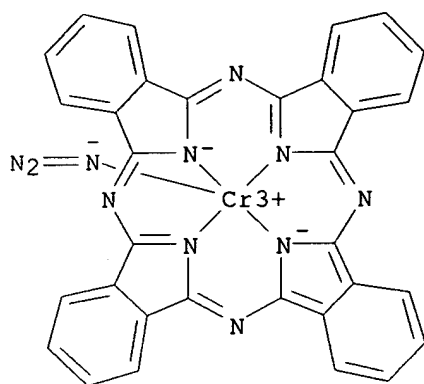
CM 1

CRN 108820-38-8

CMF C32 H16 Cr N11

CCI CCS

CDES 7:SP-5-12



RN 108820-41-3 HCAPLUS

CN Manganese, azido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-,
(SP-5-12)-, homopolymer (9CI) (CA INDEX NAME)

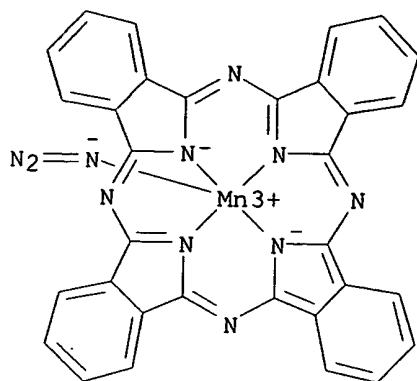
CM 1

CRN 108820-40-2

CMF C32 H16 Mn N11

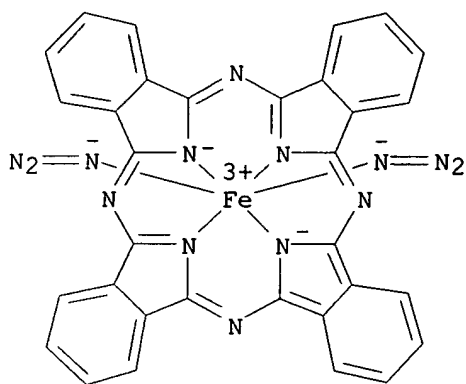
CCI CCS

CDES 7:SP-5-12

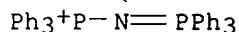


- L48 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 AN 1986:434539 HCAPLUS
 DN 105:34539
 TI Spin states in iron(III) phthalocyanines studied by Moessbauer, magnetic susceptibility, and ESR measurements
 AU Kennedy, Brendan J.; Murray, Keith S.; Zwack, Peter R.; Homborg, Heinrich; Kalz, Winfried
 CS Dep. Chem., Monash Univ., Clayton, 3168, Australia
 SO Inorg. Chem. (1986), 25(15), 2539-45
 CODEN: INOCAJ; ISSN: 0020-1669
 DT Journal
 LA English
 AB Magnetic susceptibility, Moessbauer, and ESR measurements, over a wide temp. range, were used to det. the ground states and electronic structures of a range of Fe(III) phthalocyanine complexes. Anionic 6-coordinate species $R[FeL_2(Pc(2-))]$ (R^+ = bulky cation; $L = OH^-, OPh^-, NCO^-, NCS^-, N_3^-, CN^-$) display low-spin d5 characteristics. Magnetic moments at 295 K are at 2.05-2.49 μ_B and show a Curie-Weiss dependence on temp. at 4.2-295 K. Well-resolved ESR spectra were obtained on neat powders of the dihydroxo, diphenoxo, and diazido derivs. Anal. of the 3 g value line shapes in terms of a simple crystal field model yielded values of the tetragonal and rhombic splitting parameters that were similar in magnitude to those recently reported for anionic Fe porphyrins of type $[Fe(OR)2TPP]^-$ (H_2TPP = tetraphenylporphyrin). Moessbauer parameters are in the ranges normally obsd. for low-spin FeIII-N4 macrocycles. The dicyano species generally displays differences in electronic detail from those of the other axially ligated derivs. In the resonance Raman spectra the cyano, isocyanato, and isothiocyanato complexes display electronic Raman transitions at 525, 490, and 520 cm^{-1} , resp., arising from transitions within the spin-orbit split sublevels of the $2T_{2g}(O_h)$ ground state. A wide range of 5-coordinate complexes with halide and O-donor axial ligands were studied of type $FeX(Pc(2-))$ ($X = Cl, Br, I, RCO_2, \text{ or } RSO_3$). These compds. display intermediate-spin ($S = 3/2$) or spin-admixed ($S = 3/2-S = 5/2$) behavior as judged by magnetic moments (3.9-4.53 μ_B) and Moessbauer parameters (δ . approx. 0.28 mm s $^{-1}$; $\Delta E_Q = 2.94-3.23$ mm s $^{-1}$). Comparisons are made with related $FeX(\text{porphyrinato})$ complexes. In contrast to the many examples of high-spin, $S = 5/2$, Fe(III) porphyrins, there are very few well-characterized high-spin phthalocyanine analogs. One such example is $[Fe(Pc(2-))]^{20}$. Its electronic features are briefly described together with those for $[Fe(SO_4)(Pc(2-))]^-$.

IT 102588-77-2
 RL: RCT (Reactant)
 (ESR and Moessbauer spectra, magnetic properties and spin state of)
 RN 102588-77-2 HCAPLUS
 CN Phosphorus(1+), triphenyl(P,P,P-triphenylphosphine imidato-N)-, (T-4)-,
 (OC-6-12)-diazido[29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]ferrate(1-)
 (9CI) (CA INDEX NAME)
 CM 1
 CRN 102588-76-1
 CMF C32 H16 Fe N14
 CCI CCS
 CDES 7:OC-6-12



CM 2
 CRN 48236-06-2
 CMF C36 H30 N P2
 CDES 7:T-4



L48 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2002 ACS
 AN 1979:160054 HCAPLUS
 DN 90:160054
 TI Photochemical pathways of the dimeric, mixed dimer, and monomeric
 sulfophthalocyanines of cobalt(III) and iron(II)
 AU Ferraudi, G.
 CS Radiat. Lab., Univ. Notre Dame, Notre Dame, Indiana, USA
 SO Inorg. Chem. (1979), 18(4), 1005-13
 CODEN: INOCAJ; ISSN: 0020-1669
 DT Journal
 LA English
 AB The photochem. reactivity of the dimeric, mixed dimer, and monomeric
 sulfophthalocyanines of Co(III) and Fe(II) was investigated by

steady-state and flash irradiations. The dimeric species photodissocd. into sulfophthalocyanine radicals which were coordinated to either Co(III) or Fe(II) metal centers. Reactions of such intermediates were investigated by interception with alcs. and O₂. Also, photoredox reactions were detected with monomeric acidocobalt(III) sulfophthalocyanines. These processes produce the oxidn. of the acido ligands (C-, Br-, N₃-, I-) and the redn. of the metal center.

IT 69028-18-8 69028-19-9

RL: RCT (Reactant)

(photolysis of, in azide-contg. soln., product quantum yield in)

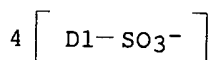
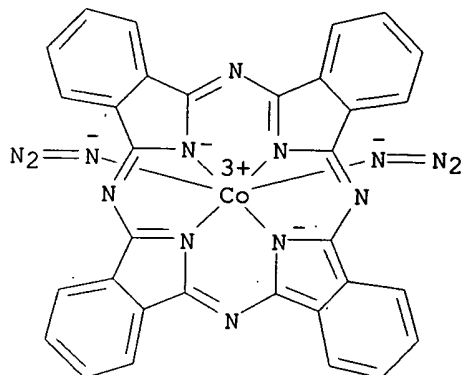
RN 69028-18-8 HCAPLUS

CN Cobaltate(4-), aquaazido[29H,31H-phthalocyanine-C,C,C,C-tetrasulfonato(6-)-N29,N30,N31,N32]- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 69028-19-9 HCAPLUS

CN Cobaltate(5-), diazido[29H,31H-phthalocyanine-C,C,C,C-tetrasulfonato(6-)-N29,N30,N31,N32]- (9CI) (CA INDEX NAME)



=> d que

L2

STR

N~N~N
1 2 3

← Azide - can be located anywhere in structure.

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

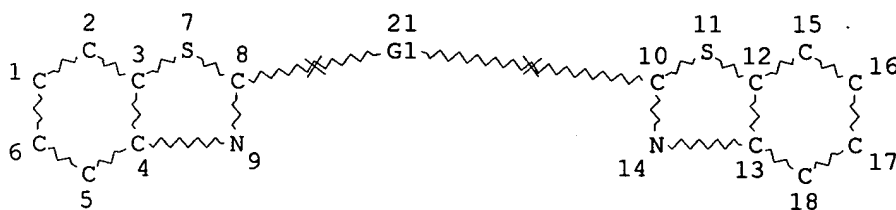
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L6

STR



Basic structure of
Cyanine dye as per
fig.3.

REP G1=(1-10) C

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L8

19 SEA FILE=REGISTRY SSS FUL L6 AND L2

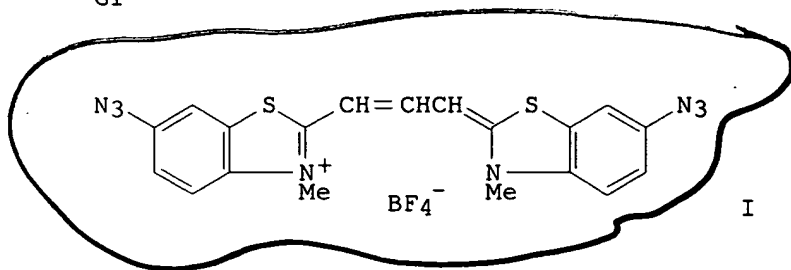
L9

5 SEA FILE=HCAPLUS ABB=ON PLU=ON L8

(Open to all substitution
Ring fusion
all bonds unspecified)

=> d bib abs hitstr 1-5

L9 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS
 AN 1984:439817 HCAPLUS
 DN 101:39817
 TI Photochemistry of azide group-containing dyes in solution
 AU Pochinok, V. Ya.; Smirnov, V. A.; Brichkin, S. B.; Avramenko, L. F.;
Tyiltina, L. I.; Grigorenko, T. F.; Ol'shevskaya, I. A.; Skopenko, V. N.
 CS Kiev. Gos. Univ., Kiev, USSR
 SO Ukr. Khim. Zh. (Russ. Ed.) (1984), 50(3), 296-301
 CODEN: UKZHAU; ISSN: 0041-6045
 DT Journal
 LA Russian
 GI



AB Study of the photodecompn. of 21 azide derivs. of triphenylmethane and cyanine dyes by irradiation at the wavelength of their resp. absorption max. showed that disson. can be caused by visible light. It req. 600 nm, proceeds through the excited singlet state by a mechanism involving predissocn., and occurs with increasing quantum yield as the azide group is more closely conjugated with the absorbing chromophore. The quantum yield for disson. ranged upward to 4 times 10^{-2} for I [90967-10-5]. Decreased nonradiative decay of electron energy also increases the quantum yield of disson.

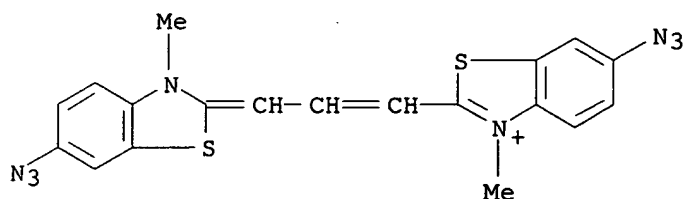
IT 23085-37-2 23085-38-3 23085-39-4
 23085-40-7 90966-97-5 90966-98-6
 90966-99-7 90967-01-4 90967-02-5
 90967-04-7 90967-05-8 90967-07-0
 90967-10-5

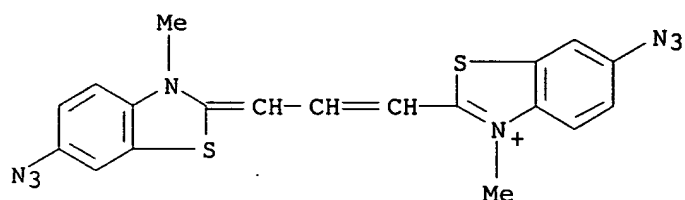
RL: PROC (Process)

(photodissocn. of, quantum yield for)

RN 23085-37-2 HCAPLUS

CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

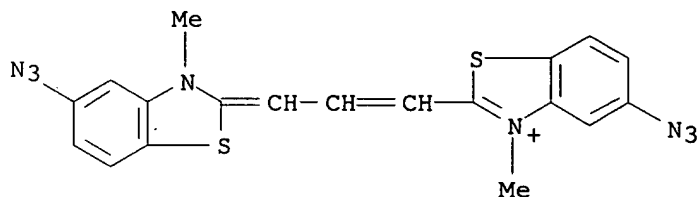




● I⁻

RN 23085-38-3 HCAPLUS

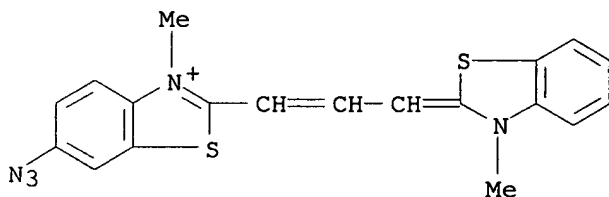
CN Benzothiazolium, 5-azido-2-[3-(5-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 23085-39-4 HCAPLUS

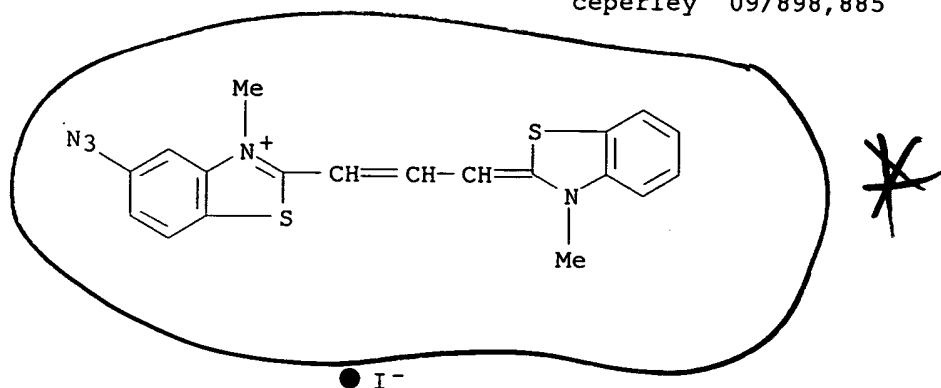
CN Benzothiazolium, 6-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)



● I⁻

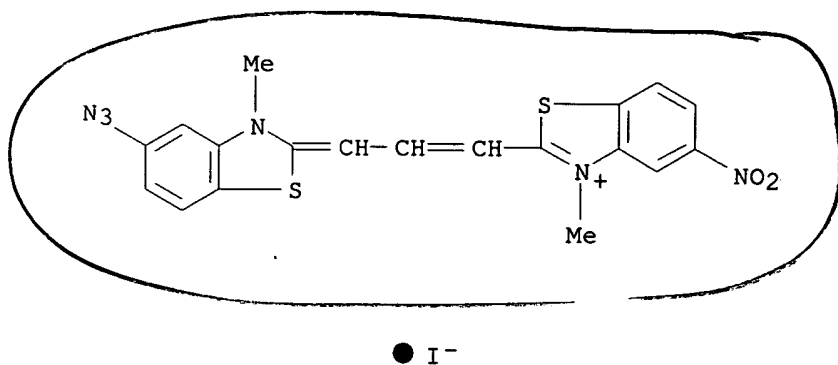
RN 23085-40-7 HCAPLUS

CN Benzothiazolium, 5-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)



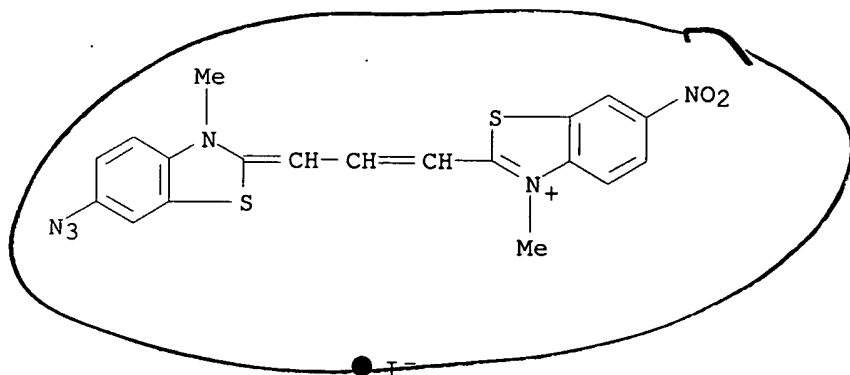
RN 90966-97-5 HCAPLUS

CN Benzothiazolium, 2-[3-(5-azido-3-methyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-methyl-5-nitro-, iodide (9CI) (CA INDEX NAME)



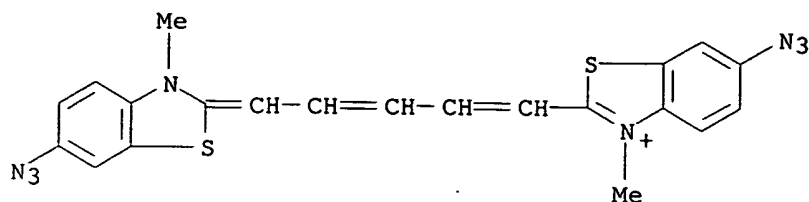
RN 90966-98-6 HCAPLUS

CN Benzothiazolium, 2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-methyl-6-nitro-, iodide (9CI) (CA INDEX NAME)



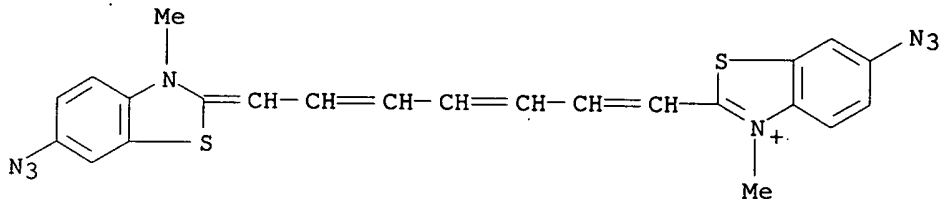
RN 90966-99-7 HCAPLUS

CN Benzothiazolium, 6-azido-2-[5-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

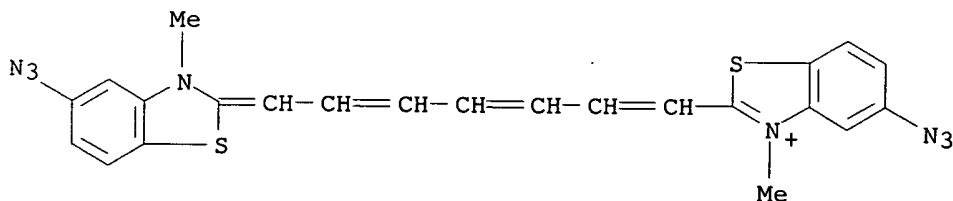
RN 90967-01-4 HCAPLUS

CN Benzothiazolium, 6-azido-2-[7-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3,5-heptatrienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

RN 90967-02-5 HCAPLUS

CN Benzothiazolium, 5-azido-2-[7-(5-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3,5-heptatrienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

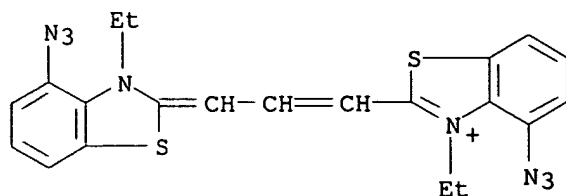
RN 90967-04-7 HCAPLUS

CN Benzothiazolium, 4-azido-2-[3-(4-azido-3-ethyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-ethyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 90967-03-6

CMF C21 H19 N8 S2

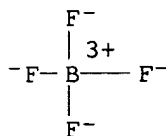


CM 2

CRN 14874-70-5

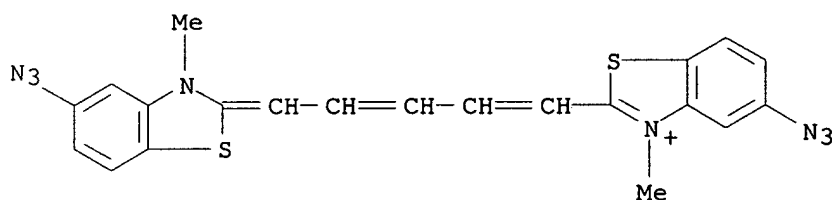
CMF B F4

CCI CCS



RN 90967-05-8 HCAPLUS

CN Benzothiazolium, 5-azido-2-[5-(5-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

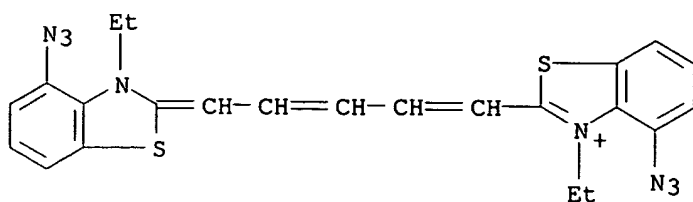
RN 90967-07-0 HCAPLUS

CN Benzothiazolium, 4-azido-2-[5-(4-azido-3-ethyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-ethyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 90967-06-9

CMF C23 H21 N8 S2

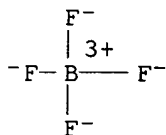


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



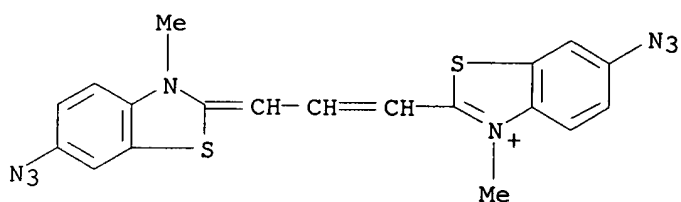
RN 90967-10-5 HCAPLUS

CN Benzo[thiazolium], 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 90967-09-2

CMF C19 H15 N8 S2

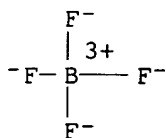


CM 2

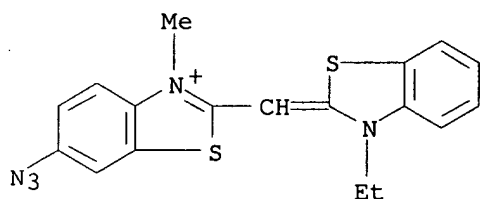
CRN 14874-70-5

CMF B F4

CCI CCS

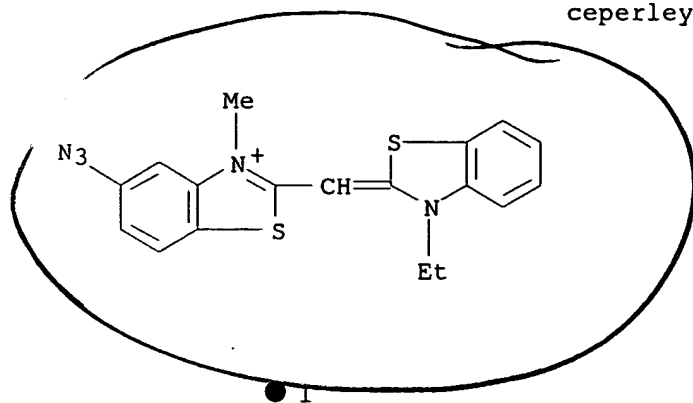


L9 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2002 ACS
 AN 1974:522751 HCAPLUS
 DN 81:122751
 TI Synthesis and reactions of azides of heterocyclic compounds. III. Cyanine
 dyes from azidobenzothiazole and benzimidazole
 AU Ol'shevskaya, I. A.; Pochinok, V. Ya.
 CS Kiev. Gos. Univ. im. Shevchenko, Kiev, USSR
 SO Khim. Geterotsikl. Soedin. (1974), (5), 640-2
 CODEN: KGSSAQ
 DT Journal
 LA Russian
 AB The visible spectra of cyanines I-IV (R = 5- or 6-N₃; n = 0 or 1; X = S, NMe, NPh; R₁ = H, N₃; R₂ = Me, Et, R₃ = Me, Et) show that the N₃ group has a bathochromic effect which depends little on its position (5 or 6) in a benzazole ring. The presence of 2 N₃ groups (as in II, R = R₁ = N₃) has twice the bathochromic effect as the presence of a single N₃ group. II (R = 5-N₃, R₁ = H, R₂ = Et, R₃ = Me, X = S, n = 0) [52584-69-7] was prepd. by refluxing equimolar amts. of 5-azido-2-methylbenzothiazole methiodide [23085-48-5], 3-ethyl-2-(methylthio)benzothiazolium tosylate [50716-34-2], and Et₃N in EtOH. Other cyanines were prepd. by similar conventional means from, e.g., 5-azido-2-methyl-1-phenylbenzimidazole ethiodide [52584-60-8] or 6-azido-1,2-dimethylbenzimidazole ethiodide [52584-61-9].
 IT 52584-62-0P 52584-69-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 52584-62-0 HCAPLUS
 CN Benzothiazolium, 6-azido-2-[(3-ethyl-2(3H)-benzothiazolylydene)methyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 52584-69-7 HCAPLUS
 CN Benzothiazolium, 5-azido-2-[(3-ethyl-2(3H)-benzothiazolylydene)methyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

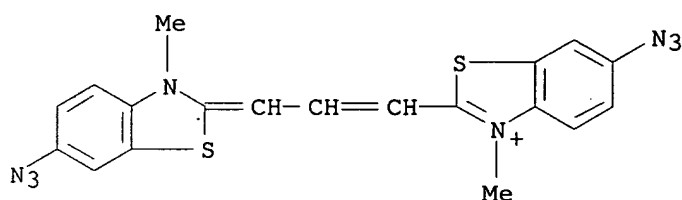


IT 23085-37-2 23085-38-3 23085-39-4
23085-40-7

RL: PRP (Properties)
(visible spectra of)

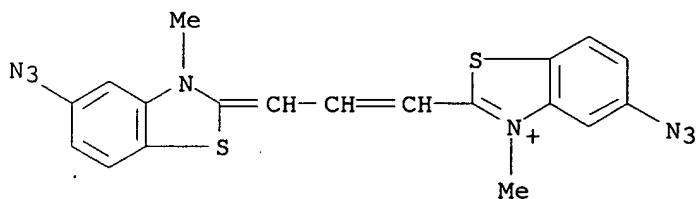
RN 23085-37-2 HCAPLUS

CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



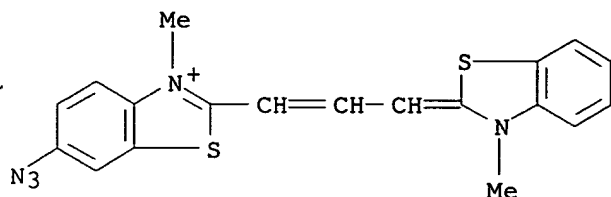
RN 23085-38-3 HCAPLUS

CN Benzothiazolium, 5-azido-2-[3-(5-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

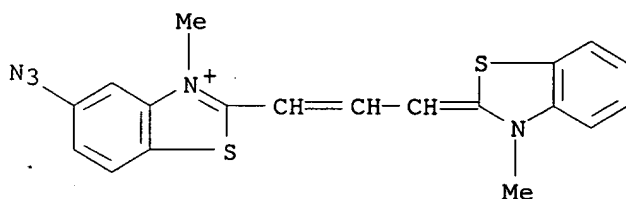


RN 23085-39-4 HCAPLUS

CN Benzothiazolium, 6-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I⁻

RN 23085-40-7 HCAPLUS
 CN Benzothiazolium, 5-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I⁻

L9 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS
 AN 1974:76697 HCAPLUS
 DN 80:76697
 TI Photoresists
 IN Clecak, Nicholas J.; Cox, Robert James
 PA International Business Machines Corp.
 SO Ger. Offen., 9 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2314868	A1	19731004	DE 1973-2314868	19730326
	FR 2177770	A1	19731109	FR 1973-6803	19730220
	FR 2177770	B1	19790119		
	JP 49017223	A2	19740215	JP 1973-23405	19730228
	JP 56017655	B4	19810423		
	US 3887379	A	19750603	US 1973-388706	19730815
PRAI	US 1972-239794		19720330		

AB The adhesion and light-sensitivity of photoresists consisting of a photohardenable polymer and a film-forming binder can be increased by 0.5-10% of an azo or cyanine dye contg. an N3 group. Thus, 7-hydroxy-2-naphthylamine-HCl was converted to 7-azidonaphthol by

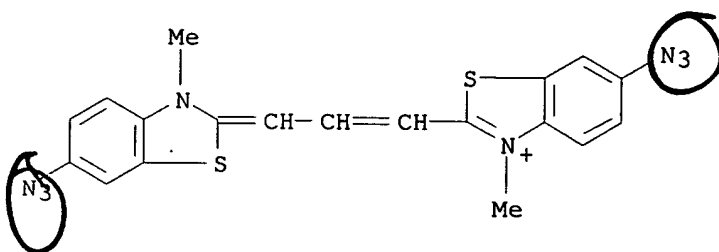
diazotization and reaction with NaN_3 . Coupling with diazotized $p\text{-Me}_2\text{NC}_6\text{H}_4\text{NH}_2$ yielded 7-azido-1-(p -dimethylaminophenylazo)-2-naphthol. A photoresist compn. contained 1.9 g of it with poly(2-chloro-1,3-butadiene) and polyamide 10 g each, stearic acid 900 mg, and phenyl-2-naphthylamine 200 mg in xylene 100 ml.

IT 23085-37-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 23085-37-2 HCAPLUS

CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolyldiene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



● I^-

L9 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2002 ACS

AN 1972:541472 HCAPLUS

DN 77:141472

TI Heterylaryl-N-hydroxytriazenes. I. Synthesis of N-hydroxytriazenes, quaternary salts, and cyanine dyes with hydroxytriazene groups

AU Korotkaya, E. D.; Pochinok, V. Ya.

CS Kiev. Gos. Univ. im. Shevchenko, Kiev, USSR

SO Khim. Geterotsikl. Soedin. (1972), (6), 786-90

CODEN: KGSSAQ

DT Journal

LA Russian

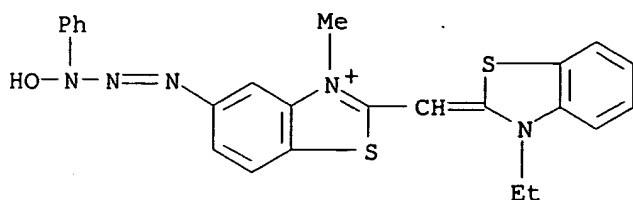
AB Eight merocyanine, carbocyanine, and monomethinecyanine dyes contg. the hydroxytriazene group were prepd. PhNHOH was coupled with diazotized 5-amino-2-methylbenzothiazole to give triazene deriv. I [36636-27-8], which was quaternized with MeI and condensed with 5-(acetanilidomethylene)-3-ethylrhodanine to give the merocyanine II [36636-28-9]; λ_{max} 535 nm. Analogs of I were obtained from 6-amino-2-methylbenzothiazole, 5-amino-2-methyl-1-phenylbenzimidazole, and 3-aminopyridine, and the first 2 were quaternized with MeI or EtI . As shown by uv spectra, the hydroxytriazene group is electron-donating.

IT 38800-98-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

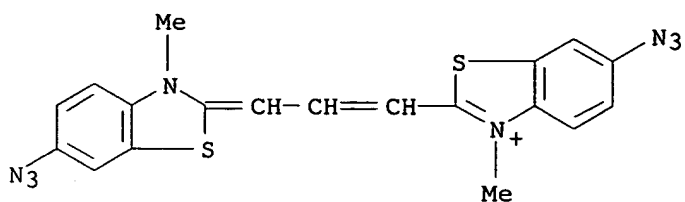
RN 38800-98-5 HCAPLUS

CN Benzothiazolium, 2-[(3-ethyl-2(3H)-benzothiazolyldiene)methyl]-5-(3-hydroxy-3-phenyl-1-triazenyl)-3-methyl-, iodide (9CI) (CA INDEX NAME)



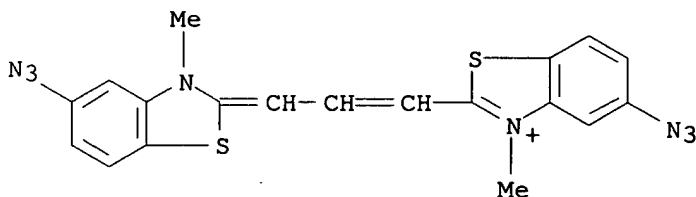
● I⁻

L9 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2002 ACS
 AN 1969:413064 HCAPLUS
 DN 71:13064
 TI Synthesis and reactions of heterocyclic azides. I. Benzothiazole and benzimidazole azides
 AU Ol'shevskaya, I. A.; Pochinok, V. Ya.; Avramenko, L. F.
 CS Kiev. Gos. Univ. im. Shevchenko, Kiev, USSR
 SO Khim. Geterotsikl. Soedin. (1968), (5), 898-901
 CODEN: KGSSAQ
 DT Journal
 LA Russian
 GI For diagram(s), see printed CA Issue.
 AB 6-Azido-2-methylbenzothiazole (I), 90% 5-azido-2-methylbenzothiazole (II), m. 56.degree., 80% 6-azido-1,2-di-methylbenzimidazole (III), m. 66.degree., and 80% 5-azido-1-phenyl-2-methylbenzimidazole (IV), m. 108-10.degree., were obtained by a known method (Pochinok, V. Ya., Avramenko, L. F., 1962). I-III heated 7 hrs. with MeI in a sealed tube at 60-70.degree. gave: 63% I.MeI, m. 173-4.degree.; 46% II.MeI, m. 152.degree.; 74% III.MeI, m. 172-3.degree.. III and IV heated 2 hrs. with 10X excess EtI in a sealed tube at 100.degree. gave 60% III.EtI, m. 167-8.degree., and 53% IV.EtI, m. 180-1.degree.. I.MeI heated with p-Me2NC6H4CHO in Ac2O on water-bath gave 66.6% V.I- (R = 6-N3), m. 170-2.degree. (EtOH), .lambda.max. 535 m.mu.. II.MeI gave similarly V.I- (5-N3), m. 199-202.degree., .lambda.max. 540 m.mu.. I.MeI heated with HC(OEt)3 in Ac2O and kept 24 hrs. gave 51% VI (R1 = R2 = 6-N3), .lambda.max. 578 m.mu.. II.MeI gave similarly 46.6% VI (R1 = R2 = 5-N3), .lambda.max. 576 m.mu.. I.MeI heated with 3-methyl-2-formylmethylenbenzothiazoline in Ac2O gave 79% VI (R1 = 6-N3, R2 = H), m. 213-15.degree. (EtOH), .lambda.max. 570 m.mu.. II.MeI gave similarly 68% VI (R1 = 5-N3, R2 = H), m. 208-10.degree. (EtOH), .lambda.max. 566 m.mu.. I.MeI and acetanilido-methylene-N-ethylrhodanine heated 30 min. in EtOH or BuOH in presence of Et3N gave 51% VII (R = 6-N3), m. 270-2.degree., .lambda.max. 536 m.mu.. II.MeI gave similarly 68% VII (R = 5-N3), m. 284.degree., .lambda.max. 530 m.mu.. Uv and ir spectra are discussed.
 IT 23085-37-2P 23085-38-3P 23085-39-4P
 23085-40-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 23085-37-2 HCAPLUS
 CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

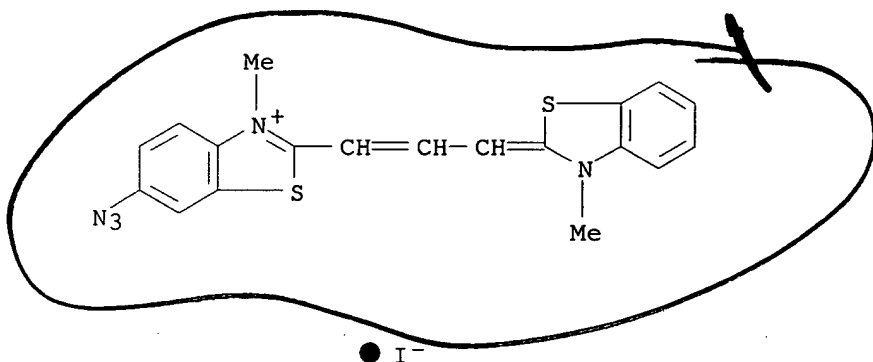
RN 23085-38-3 HCAPLUS

CN Benzothiazolium, 5-azido-2-[3-(5-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

RN 23085-39-4 HCAPLUS

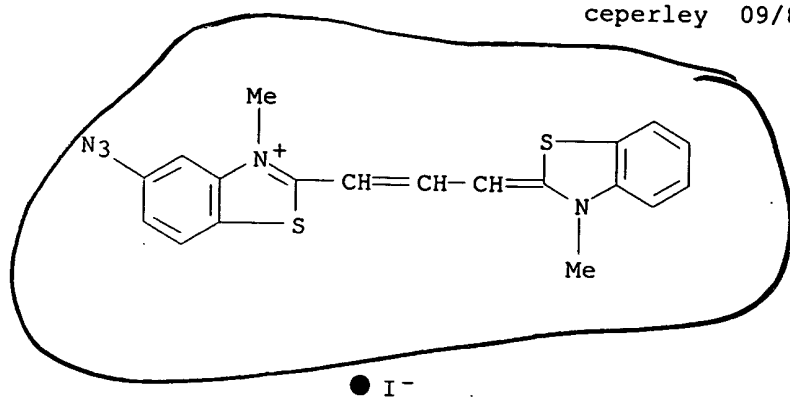
CN Benzothiazolium, 6-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I⁻

RN 23085-40-7 HCAPLUS

CN Benzothiazolium, 5-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

see p. 948
same author



=> d bib abs hitstr 1-5

L9 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2002 ACS
AN 1984:439817 HCAPLUS

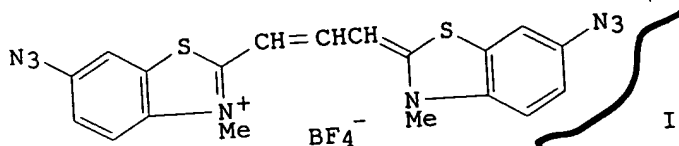
DN 101:39817

TI Photochemistry of azide group-containing dyes in solution,
AU Pochinok, V. Ya.; Smirnov, V. A.; Brichkin, S. B.; Avramenko, L. F.;CS Tyltina, L. I.; Grigorenko, T. F.; Ol'shevskaya, I. A.; Skopenko, V. N.
Kiev. Gos. Univ., Kiev, USSRSO Ukr. Khim. Zh. (Russ. Ed.) (1984), 50(3), 296-301
CODEN: UKZHAU; ISSN: 0041-6045

DT Journal

LA Russian

GI



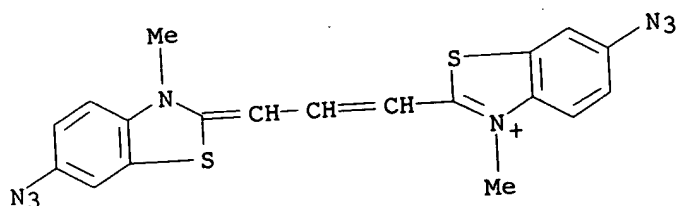
AB Study of the photodecompn. of 21 azide derivs. of triphenylmethane and cyanine dyes by irradiation at the wavelength of their resp. absorption max. showed that disocn. can be caused by visible light. λ_{max} 600 nm, proceeds through the excited singlet state by a mechanism involving predissocn., and occurs with increasing quantum yield as the azide group is more closely conjugated with the absorbing chromophore. The quantum yield for disocn. ranged upward to 4 times. 10^{-2} for I [90967-10-5]. Decreased nonradiative decay of electron energy also increases the quantum yield of disocn.

IT 23085-37-2 23085-38-3 23085-39-4
23085-40-7 90966-97-5 90966-98-6
90966-99-7 90967-01-4 90967-02-5
90967-04-7 90967-05-8 90967-07-0
90967-10-5.

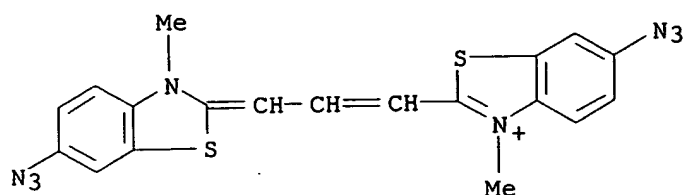
RL: PROC (Process)

(photodisocn. of, quantum yield for)

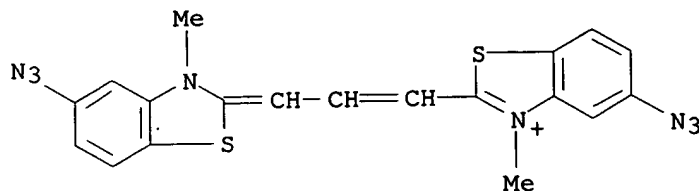
RN 23085-37-2 HCAPLUS
CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolyli-
1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



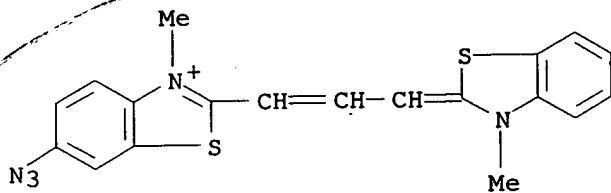
I-

● I⁻

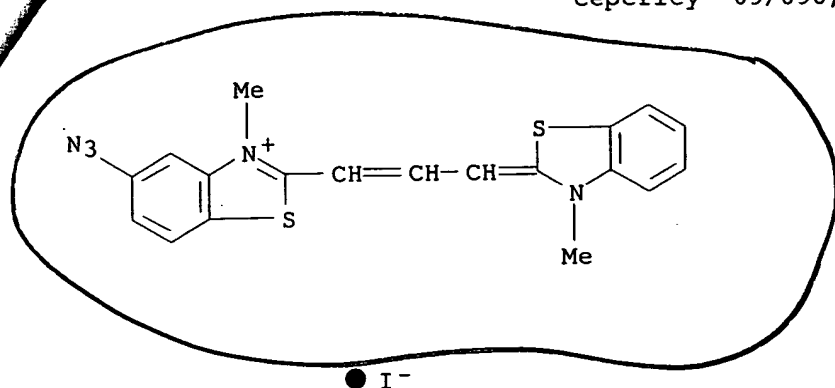
RN 23085-38-3 HCAPLUS
 CN Benzothiazolium, 5-azido-2-[3-(5-azido-3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

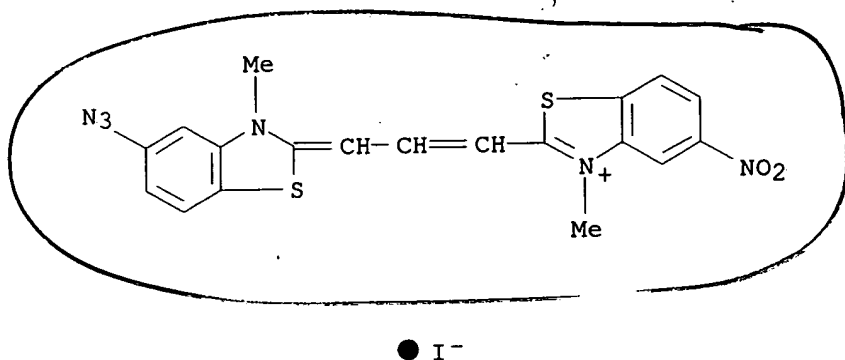
RN 23085-39-4 HCAPLUS
 CN Benzothiazolium, 6-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I⁻

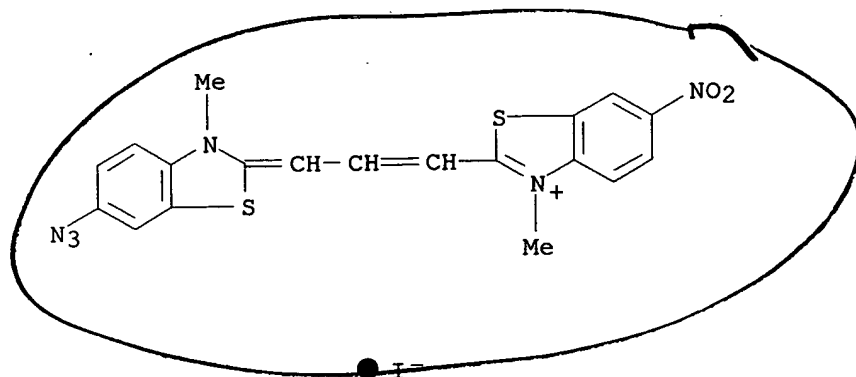
RN 23085-40-7 HCAPLUS
 CN Benzothiazolium, 5-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)



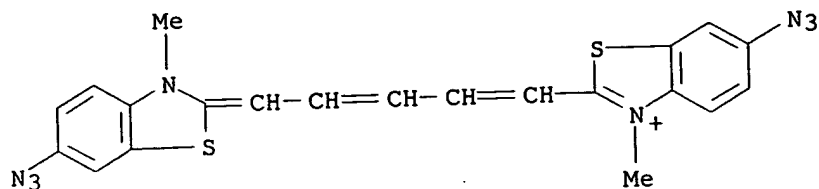
RN 90966-97-5 HCAPLUS
 CN Benzothiazolium, 2-[3-(5-azido-3-methyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-methyl-5-nitro-, iodide (9CI) (CA INDEX NAME)



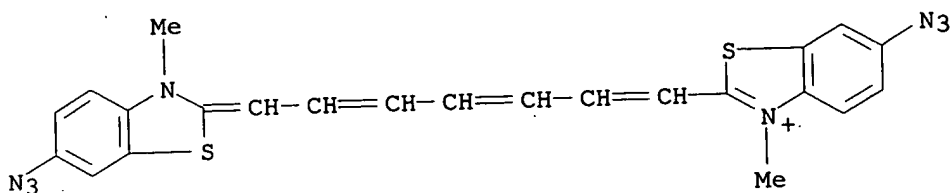
RN 90966-98-6 HCAPLUS
 CN Benzothiazolium, 2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-methyl-6-nitro-, iodide (9CI) (CA INDEX NAME)



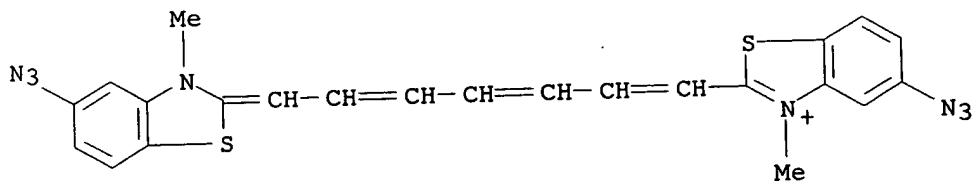
RN 90966-99-7 HCAPLUS
 CN Benzothiazolium, 6-azido-2-[5-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

RN 90967-01-4 HCAPLUS
 CN Benzothiazolium, 6-azido-2-[7-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3,5-heptatrienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

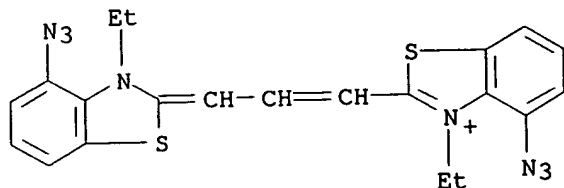
RN 90967-02-5 HCAPLUS
 CN Benzothiazolium, 5-azido-2-[7-(5-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3,5-heptatrienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

RN 90967-04-7 HCAPLUS
 CN Benzothiazolium, 4-azido-2-[3-(4-azido-3-ethyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-ethyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 90967-03-6
 CMF C21 H19 N8 S2

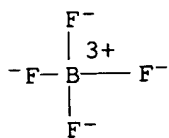


CM 2

CRN 14874-70-5

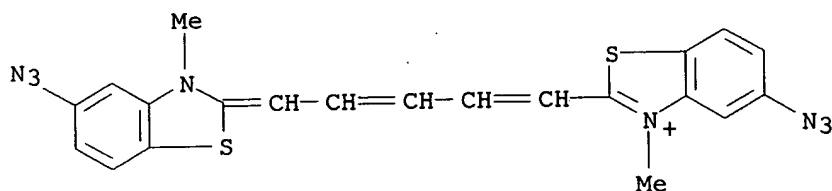
CMF B F4

CCI CCS



RN 90967-05-8 HCAPLUS

CN Benzothiazolium, 5-azido-2-[5-(5-azido-3-methyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

● I⁻

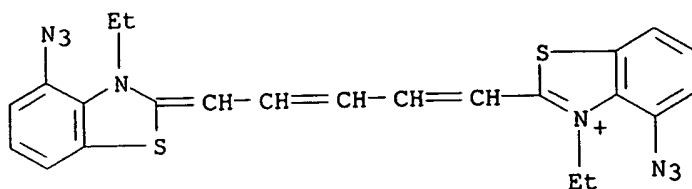
RN 90967-07-0 HCAPLUS

CN Benzothiazolium, 4-azido-2-[5-(4-azido-3-ethyl-2(3H)-benzothiazolylydene)-1,3-pentadienyl]-3-ethyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 90967-06-9

CMF C23 H21 N8 S2

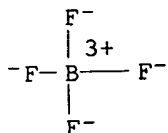


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



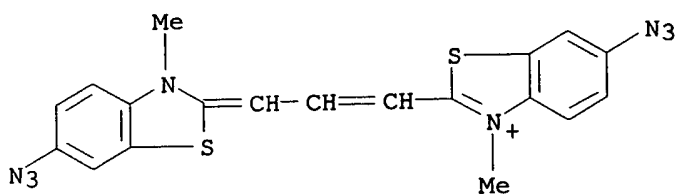
RN 90967-10-5 HCAPLUS

CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolylydene)-1-propenyl]-3-methyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 90967-09-2

CMF C19 H15 N8 S2

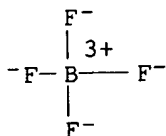


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



L9 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2002 ACS

AN 1974:522751 HCAPLUS

DN 81:122751

TI Synthesis and reactions of azides of heterocyclic compounds. III. Cyanine

dyes from azidobenzothiazole and benzimidazole

AU Orshemskaia, M. A.; Pochinok, V. Ya.

CS Kiev. Gos. Univ. im. Shevchenko, Kiev, USSR

SO Khim. Geterotsikl. Soedin. (1974), (5), 640-2

CODEN: KGSSAQ

DT Journal

LA Russian

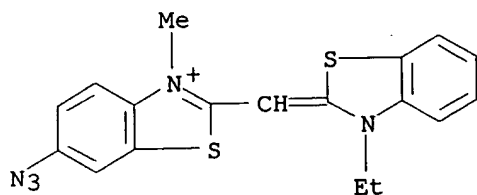
AB The visible spectra of cyanines I-IV (R = 5- or 6-N₃; n = 0 or 1; X = S, NMe, NPh; R₁ = H, N₃; R₂ = Me, Et, R₃ = Me, Et) show that the N₃ group has a bathochromic effect which depends little on its position (5 or 6) in a benzazole ring. The presence of 2 N₃ groups (as in II, R = R₁ = N₃) has twice the bathochromic effect as the presence of a single N₃ group. II (R = 5-N₃; R₁ = H; R₂ = Et, R₃ = Me, X = S, n = 0) [52584-69-7] was prepd. by refluxing equimolar amts. of 5-azido-2-methylbenzothiazole methiodide [23085-48-5], 3-ethyl-2-(methylthio)benzothiazolium tosylate [50716-34-2], and Et₃N in EtOH. Other cyanines were prepd. by similar conventional means from, e.g., 5-azido-2-methyl-1-phenylbenzimidazole ethiodide [52584-60-8] or 6-azido-1,2-dimethylbenzimidazole ethiodide [52584-61-9].

IT 52584-62-0P 52584-69-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 52584-62-0 HCAPLUS

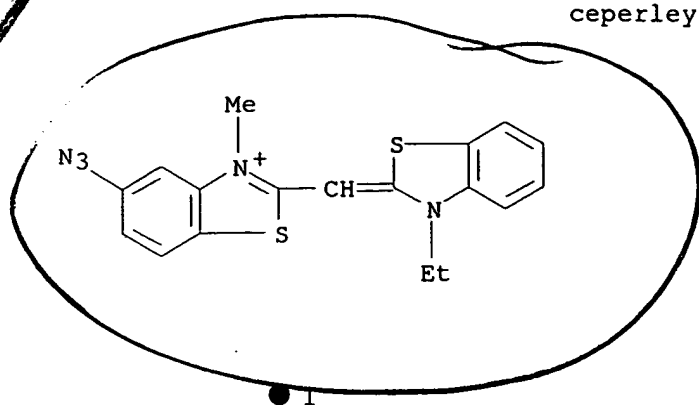
CN Benzothiazolium, 6-azido-2-[(3-ethyl-2(3H)-benzothiazolylydene)methyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 52584-69-7 HCAPLUS

CN Benzothiazolium, 5-azido-2-[(3-ethyl-2(3H)-benzothiazolylydene)methyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

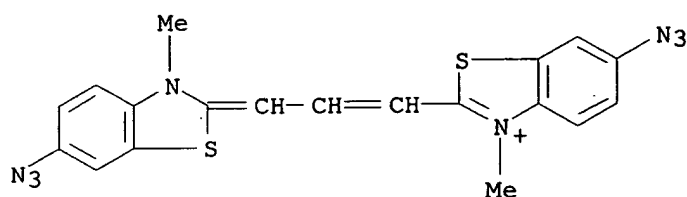


IT 23085-37-2 23085-38-3 23085-39-4
23085-40-7

RL: PRP (Properties)
(visible spectra of)

RN 23085-37-2 HCAPLUS

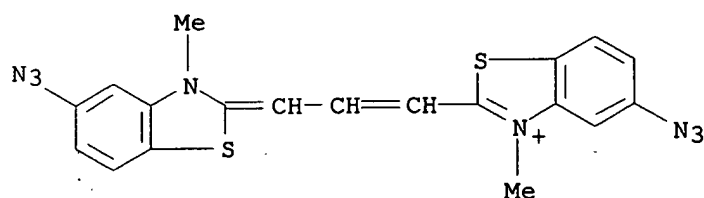
CN Benzothiazolium, 6-azido-2-[3-(6-azido-3-methyl-2(3H)-benzothiazolyliidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)



● I⁻

RN 23085-38-3 HCAPLUS

CN Benzothiazolium, 5-azido-2-[3-(5-azido-3-methyl-2(3H)-benzothiazolyliidene)-1-propenyl]-3-methyl-, iodide (9CI) (CA INDEX NAME)

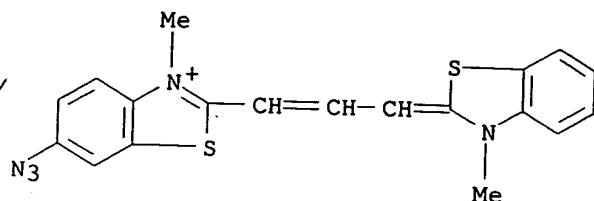


● I⁻

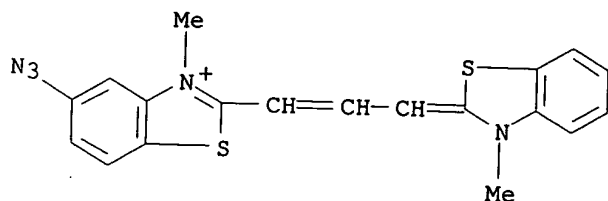
RN 23085-39-4 HCAPLUS

CN Benzothiazolium, 6-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolyliidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

September 6, 2002

● I⁻

RN 23085-40-7 HCAPLUS
 CN Benzothiazolium, 5-azido-3-methyl-2-[3-(3-methyl-2(3H)-benzothiazolylydene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I⁻

L9 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2002 ACS
 AN 1974:76697 HCAPLUS
 DN 80:76697
 TI Photoresists
 IN Clecak, Nicholas J.; Cox, Robert James
 PA International Business Machines Corp.
 SO Ger. Offen., 9 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2314868	A1	19731004	DE 1973-2314868	19730326
	FR 2177770	A1	19731109	FR 1973-6803	19730220
	FR 2177770	B1	19790119		
	JP 49017223	A2	19740215	JP 1973-23405	19730228
	JP 56017655	B4	19810423		
	US 3887379	A	19750603	US 1973-388706	19730815
PRAI	US 1972-239794		19720330		

AB The adhesion and light-sensitivity of photoresists consisting of a photohardenable polymer and a film-forming binder can be increased by 0.5-10% of an azo or cyanine dye contg. an N3 group. Thus, 7-hydroxy-2-naphthylamine-HCl was converted to 7-azidonaphthol by